

The Mining Journal

LONDON, OCTOBER 31, 1958

Vol. 251. No. 6428.

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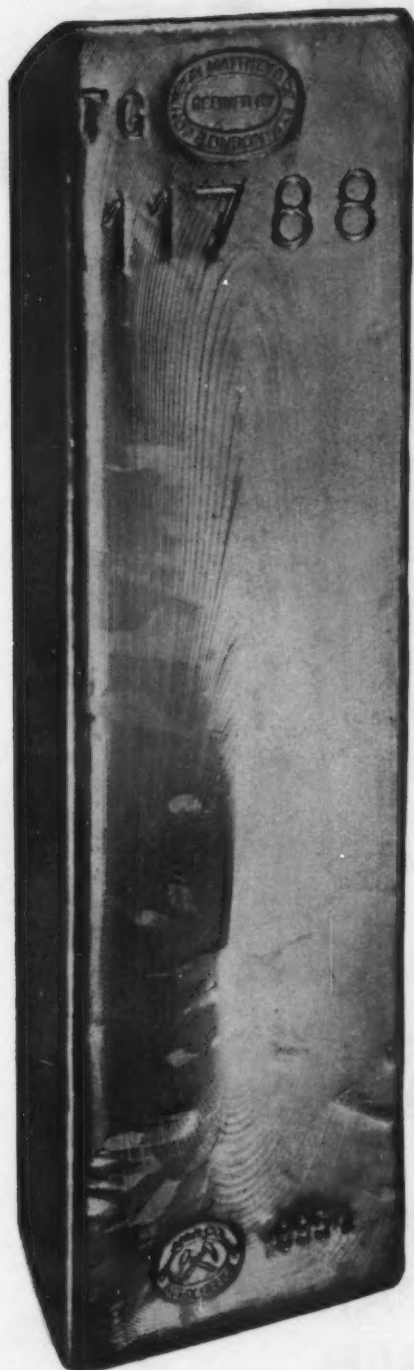
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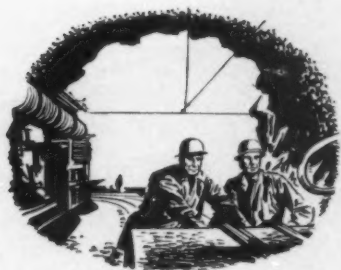
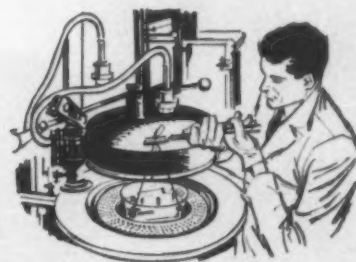
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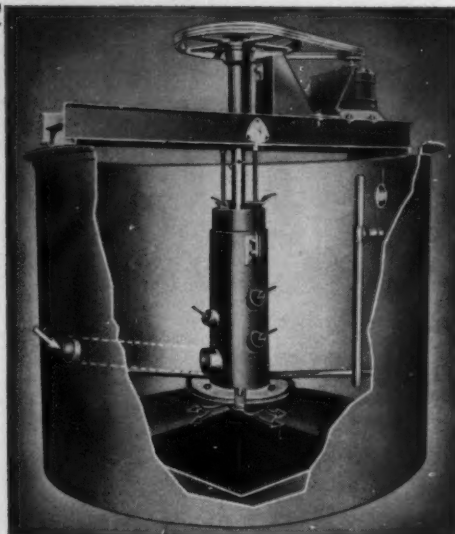
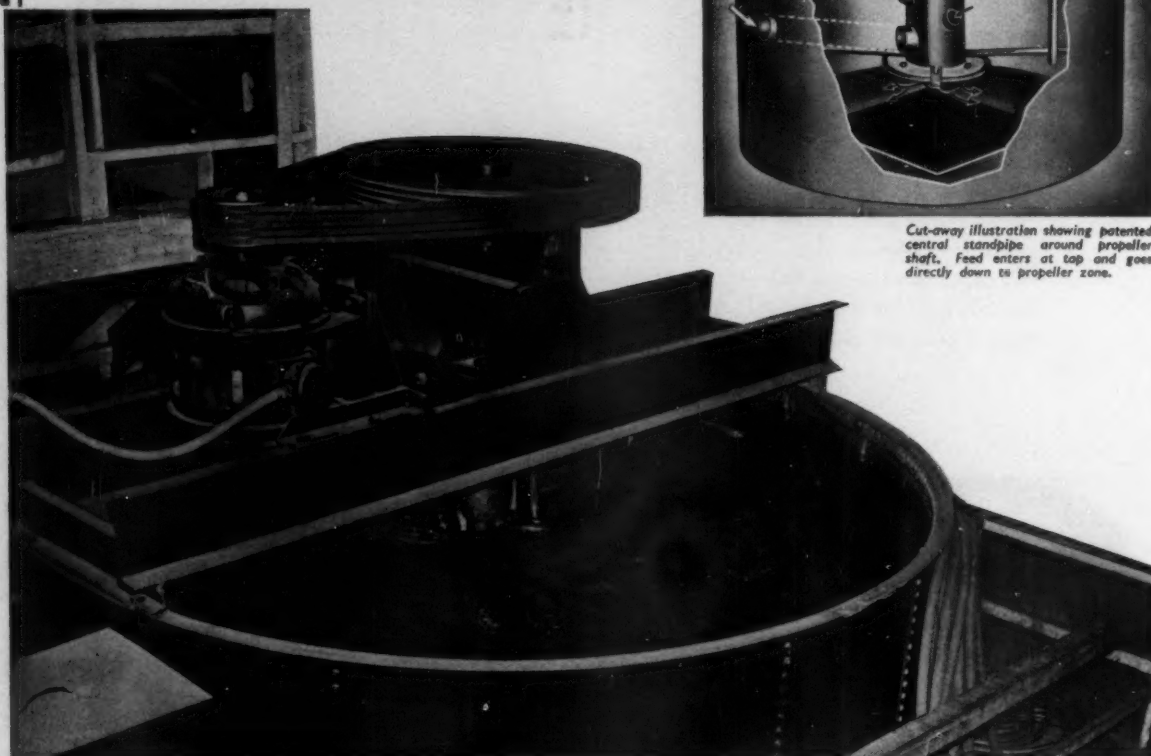
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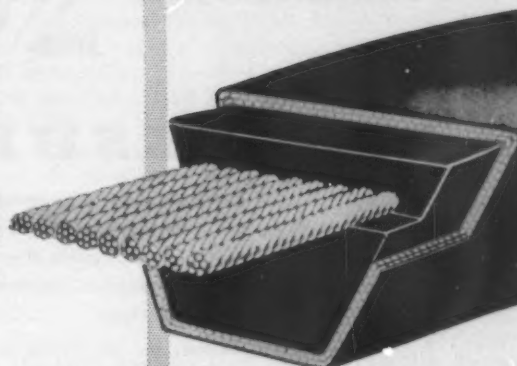
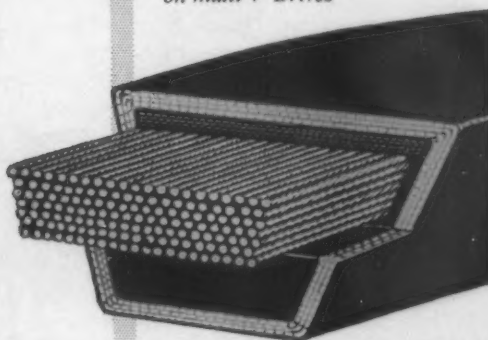
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The Mining Journal

London, October 31, 1958

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Vol. 251

No. 6428

Established 1835

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Published each Friday by

THE MINING JOURNAL LTD.

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**15 WILSON STREET,
LONDON, E.C.2**

Telegraphic

Tutwork London

Telephone

MONarch 2567 (3 lines)

Annual Subscription £3

Single copy ninepence

The Changing Pattern of Mineral Supplies

HOWEVER much one may disagree with some of its principal recommendations, the Declaration of Policy adopted by the American Mining Congress at San Francisco, California, in September this year, is to be welcomed as a challenging contribution to the discussion of mineral resources policy.

Even in the United States, where for many years the Administration has recognized the need for a strong national minerals policy, progress has been painfully slow. As for the Commonwealth, the concept of a collective approach to the development of mineral resources—though perhaps gradually gaining ground—still appears depressingly far from any prospect of realization.

On studying the declaration, which has now been issued in brochure form, one cannot fail to be struck by the wide field of agreement which exists between the views of the American Mining Congress and those expressed by the group of international experts which met in Paris last July (*vide The Mining Journal*, July 18, 1958, p. 67), inasmuch as the basic consideration in each case is the necessity of expanding the supply of minerals to meet future needs.

"Wise use of the mineral resources buried in the American soil," states the Congress declaration, "has brought this land from a thinly settled wilderness to an industrial nation of wealth and power unmatched in history. Far-sighted government action in the past has helped develop these mineral resources to make our people prosperous and our nation secure. Now we have reached that point in history when men of vision must take a new look at the future. . . . Our resources are needed more than ever, for now they not only support our country but help to support many nations."

The wisdom of these observations can scarcely be gainsaid, nor can there be any quarrel with the conclusion that the mining industry, "which has fed the nation raw materials for its marvellous growth", must not be neglected now.

On the subject of taxation and incentives, the American Mining Congress is basically in agreement with the Paris experts. "Minerals of the earth must be made available for our defence and general welfare", asserts the declaration. "Finding and developing new reserves to replace those exhausted must be encouraged in every possible way. The costs, the risks and the failures are constantly increasing. Profits, after taxes, must be adequate to furnish needed incentives if we are to have the continuing supply of required minerals".

Also in close accordance with the views expressed at Paris is the importance attached to maintaining the full availability of public lands for the finding and development of the national mineral resources, the closing of any area to mining, without very good reason, being described as contrary to the public interest.

In contrast to the essentially international standpoint of the Paris conference, however, it is with the welfare of the U.S. domestic mining industry that the declaration is primarily—and understandably—concerned. "Experience has shown", it states, "that we cannot always depend upon foreign sources of mineral

supply in an emergency, and commonsense dictates that an adequate domestic supply of minerals is essential for the protection of consumers, even in times of peace. The nature of mining, with its high initial capital costs, great risks, and the need for planning production many years in advance, requires a National Minerals Policy for the development of the mineral resources of the United States."

To this view again no exception can be taken, in so far as the practical and constructive policy advocated for the development of domestic mineral resources takes the form of tax incentives and of technical assistance by such government agencies as the Bureau of Mines and the U.S. Geological Survey, both of which have rendered signal services to the industry. The American Mining Congress is on more contentious ground, however, in its advocacy of "adequate" import taxes and/or tariff protection, to be imposed and collected if and when the average monthly price falls below a reasonable prescribed point legislated for each metal and mineral, and of import quotas which would be imposed in cases where the domestic mining industry cannot be sufficiently protected by such measures.

The effect of tariff protection and import quotas—as has been demonstrated only too clearly in recent months—is, of course, that when demand and prices fall, domestic producers are sheltered at the expense of the foreign suppliers who were welcomed and encouraged when times were good, and on whom the U.S., with its own diminishing resources of minerals, will become increasingly dependent in future years.

The dangers of such a policy are vividly illustrated by figures cited by Dr. F. W. Friedensburg in the papers he presented at Paris (*The Mining Journal*, August 8, pp. 148 and 149). Dr. Friedensburg showed that U.S. oil imports from non-industrial countries rose in the period 1913-1956 from zero to 8 per cent of the total importation; zinc and lead imports increased from zero to 50 and 91 per cent respectively; and at the same time the total quantities imported increased very steeply. It was further shown that the part played by the non-industrial countries in the development of the world's mineral output was becoming progressively greater. These countries—taken as a whole—contributed 45 per cent of world oil output in 1956, compared with 20 per cent in 1913. In the case of coal, their share of world production rose in the same period from 12 to 22 per cent. In iron ore the non-industrial part of the world contributed 11 per cent of world output in 1913 and 22 per cent in 1956. In the case of copper, the corresponding figures were 36 and 47 per cent.

As their economies continue to expand, the industrial countries will become increasingly dependent on the non-industrial countries for supplies of essential minerals, but as the latter become increasingly industrialized they will earmark more and more of their mineral resources for their own expanding needs.

It follows that, whatever the situation today, the time is coming—and may not be far off—when the non-industrial countries will enjoy all the advantages of a sellers' market and can dictate their own terms for the supply of minerals to favoured buyers. Now, therefore, when minerals are temporarily in abundant supply, is surely the time for the industrial nations to make the most favourable arrangements they can for assuring adequate resources of metals and minerals for their future needs. This is a situation which both the United Kingdom and the United States—in apparent contrast to Germany and Japan—seem unable to appreciate.

If Dr. Friedensburg's assessment of the outlook is correct, it would indeed be short-sighted for any industrial nation to assist domestic producers at the cost of antagonizing foreign exporters and jeopardizing future sources of supply. There can be no question, of course, as to the

desirability of encouraging and assisting the U.S. domestic mining industry, by any means other than tariff protection and import control, to make its maximum contribution to national and world supplies.

A point which doubtless has not escaped the attention of mineral economists in this connection is the likelihood that at some future date higher metal prices, resulting either from rising demand or from political considerations which have sealed off major sources of supply from U.S. use, will allow America's large low-grade resources to be economically mined, without incurring the high cost of subsidizing their exploitation at a time when cheap ore is readily available from other countries, as it is today.

DEVELOPMENT OF THE COPPERBELT

The mining companies associated with the Copperbelt, warned by experience south of the Limpopo in the days when South Africa was critically dependent on the price of gold, have sought to avoid the pitfalls of a single-track economy by fostering the development of other industries. In accordance with this policy of diversification, the mining industry has not only helped to finance activities such as the hydro-electric undertaking at Kariba and the development of the Rhodesian railways, both of which directly benefit the copper producers, but is also among the sponsors of the Merchant Bank of Central Africa and is identified with various important projects in other fields, a notable example being the huge Kafue Flats agricultural scheme.

It would indeed be surprising if such an outlook did not meet with the support and approval of the Government of Northern Rhodesia, which clearly recognizes the desirability of achieving a well balanced economy built on a copper foundation, as is indicated by the recent appointment of a special commissioner to study and estimate all aspects of Copperbelt expansion and development expected in the next 15 years. The Chief Conservator of Forests in the territory, Mr. C. E. Duff, has been appointed to the post. It will be his responsibility to produce a synthesis of the needs of the Copperbelt community, bearing in mind the local aspects, the best interests of the territory and the Federation, and the legal rights of all concerned.

One of the commissioner's first tasks will be to collate information about water supplies of government departments, local authorities and mining companies. To this will be added estimates of the probable growth of consumption and an assessment of alternative sources available. Mr. Duff will also estimate the expected rise in African and European population during the 15 years, and the water requirements of the Copperbelt at the end of the period, together with a forecast of future needs.

This interesting appointment sets an example which might with advantage be followed by the governments of other territories at a similar stage of development.

NIGHTMARE ON WHEELS

An alarming forecast of what might happen to metal producers if Americans insist on smaller cars has been made by Mr. Ira B. Joralemon, author of a famous book on copper. Speaking at a meeting of the San Francisco Section of the American Institute of Mining, Metallurgical and Petroleum Engineers, Mr. Joralemon pointed out that, since small cars weigh only about half as much as the present "over-sized monsters", the reduction in value of metals used in them would approach a billion and a quarter dollars a year, if the "whim" for them became universal. This estimate, he was careful to add, was based on "present depression prices".

The distinguished author went on to paint a dismal picture of the lead, zinc and nickel industries, already hard hit by the slackening of general business, reeling under the mortal blow struck by the small car fad, which, if it got out of hand, might easily lead to another great depression like that of the thirties. Most of America's remaining base metal mining districts would be forced to close down. The list of ghost towns would soon include the dying camps in Morocco, South America, Australia, and Canada, as well as the U.S. Other industries would suffer along with the conventional motor car manufacturers. For example, a switch to small cars would cut petrol consumption by about 25 per cent.

To illustrate the importance of the motor car industry to metal producers, Mr. Joralemon produced statistics which showed that 18 per cent of the steel, 42 per cent of the lead, 18 per cent of the zinc, 14 per cent of the nickel, and 7 per cent of the copper used in the U.S. in 1957 went into motor cars. "Without this colossus the American economy would be in a bad way" he declared.

In the light of these rather terrifying observations, foreign metal producers visiting the North American Continent may be disposed to look with a kindlier eye upon the glittering "behemoths" (not our epithet), which at first sight are apt to have a rather overpowering effect on European eyes. May your automobiles never grow smaller will be their heartfelt prayer! The small car is clearly gaining in sales appeal, for the number sold in the U.S. has doubled in each of the past two years. In the North American Continent, however, where the distances to be covered even by the week-end motorist are apt to be very great, the principal market outlet, in our view, will always be for cars that are large and roomy.

Does it not seem probable that the small foreign car will tend not so much to oust behemoth as to supplement him, on the principle that keeping up with the Joneses will call increasingly for the possession of both town and country cars?

Whatever the future pattern of motoring in the U.S., we are confident that the American automobile industry will continue to provide the Free World's largest single market for metal producers at home and abroad.

EXPORT OF IRON ORE FROM INDIA

Our correspondent reports that negotiations are in progress with West European countries, particularly Italy, for a joint development of iron ore resources of India in the western region, and for the development of transport facilities on a long-term basis in order to arrive at an agreement on the pattern of the one signed between India and Japan this year. This was disclosed at a meeting of the Consultative Committee of Parliament on Commerce and Industry. The Committee discussed generally the question of iron ore export. It is expected that iron ore exports this year will be larger than those of last year. Negotiations are also going on with West European countries for the export of low-grade iron ore.

Meanwhile, arrangements are being made to export 50,000 tons of iron ore to Japan this season through the State Trading Corporation of India, which has entered into a contract with Japan.

It is further reported that the builders of the Bhilai steel project have prepared a programme for the mechanization of the entire Rajhara iron ore mines of Baled Tashil in Durg district, which will meet the annual requirements of the Bhilai steel project of 2,100,000 tons. The Rajhara iron ore mines are estimated to have 114,000,000 tons of iron ore.

About 5,000 tons of mechanical equipment required for

the mechanization of the mines is expected to arrive in India shortly from the U.S.S.R.

Pending the complete mechanization of the mines, the project authorities have made arrangements to collect float ore, of which there is estimated to be about 2,000,000 tons, to meet the initial requirements of Bhilai.

PROSPECTING AT TENNANT CREEK

Peko Mines, the high-grade copper proposition, with over 1,000,000 tons of ore developed and indicated, of which proved ore is estimated at 600,000 tons with a value of 8 per cent copper, has been drilling the Orlando lease on the western side of the field, writes our Australian Correspondent. Five diamond drill bores have been completed, three of which have shown high gold values. Number 1 gave 22 ft. of core, between inclined depths of 400 ft. and 422 ft., assaying 26.05 dwt.; No. 2, 1,100 ft. west, averaged 66.2 dwt. over 5 ft. between 580 ft. and 585 ft.; No. 5, 70 ft. east of No. 1, averaged 86.3 dwt. over 7 ft. between 379 ft. and 386 ft., and 11.0 dwt. between 405 ft. and 406½ ft. inclined depths. Number 3 hole cut copper ore assaying 9.1 per cent copper between 348 ft. and 353 ft., but gold values were low.

The work is interesting because of the depth at which gold has been located. In the Australian Development Mine, gold did not persist below 315 ft. vertical, and in the Eldorado mine 400 ft. vertical, so the point at issue is whether the intersections are near the bottom of the auriferous zone or near the top of a deeper lying zone. The general history of the field limits the bottom of the auriferous zone to a vertical depth of 100 ft. to 150 ft. The indication of copper is the best located on the field outside the main Peko Mine itself. All the drilling is on two magnetic anomalies.

RECORD INVESTMENT

Investments in the E.C.S.C. coal and steel industries in 1957 reached the record level of \$1,241,000,000, approximately 25 per cent greater than the yearly average since the Community came into being in 1952. This is revealed in the annual investment report of the High Authority which forecasts an even greater investment rate for the current year.

From 1952 to 1957 a total of \$6,300,000,000 has been invested in major projects, of which 53 per cent was on the steel industry, 43 per cent on the coal mines and the remainder on the iron ore mines and briquette factories. In 1957 investment expenditure actually carried out in the coal industry and in lignite briquette factories reached \$484,000,000.

Effective production possibilities afforded by projected investment programmes should boost coal output to almost 260,000,000 tonnes in 1960. This total, according to High Authority estimates, is below what will be required in 1960 although, as discussed in previous issues of *The Mining Journal*, such estimates may be suspect. At the present time Europe is suffering from a glut of coal, attributed by the producers to faulty forecasts of the High Authority. It is, however, an indisputable fact that large-scale imports of coal in the past year, plus a slackening in industrial activity, are largely responsible for current overstocking. This may well be temporary, for already there are signs of an increasing industrial demand for coal within the Community. The entire picture could be radically changed if cuts in the long-term import programme are too drastic. It is financially a much better prospect to secure large, long-term coal contracts on a buyer's market, than to be forced into panic buying during a fuel famine.

An aerial view of the treatment plant and opencut at Mary Kathleen uranium mine, Queensland



MARY KATHLEEN OFFICIALLY OPENED



FOLLOWING two-and-a-half years of concentrated effort since its conception, the Mary Kathleen uranium mine, the ore treatment plant and township in Queensland, Australia, were officially opened on Monday, October 27, by the Prime Minister of Australia, the Rt. Hon. R. G. Menzies, in the presence of the Hon. G. F. R. Nicklin, Premier of Queensland, and other distinguished guests.

Undertaken by the Rio Tinto Co. in close collaboration with the Australian authorities and with the support of the United Kingdom Atomic Energy Authority, this development project has sprung from the discovery of a rich orebody by a syndicate of eight prospectors close to Cloncurry in July, 1954. Following the discovery, a development company, Mary Kathleen Uranium Ltd., was formed with the Walton-McConachy prospecting syndicate and Australasian Oil Exploration Ltd. as the main shareholders. Subsequently, the Rio Tinto Group became interested and an agreement was signed whereby The Rio Tinto Mining Co. of Australia Pty., Ltd., undertook to raise the necessary capital and be responsible for the management of the project. The approximate shareholding then became Rio Tinto and associates 56 per cent, Australasian Oil Exploration 35 per cent, and the Walton-McConachy Syndicate 9 per cent.

Exploration in 1955/56 revealed that there was sufficient ore to justify a large-scale mining operation and subsequently a contract was signed by The Rio Tinto Mining Co. of Australia, Mary Kathleen Uranium Ltd. and the United Kingdom Atomic Energy Authority, for the supply of uranium oxide to the value of about £A40,000,000 to the United Kingdom Atomic Energy Authority.

The development at Mary Kathleen is unique in Australia's mining history; it sets the pattern that will be followed in establishing all new major mining centres in that country.

The deposit is 500 miles from Townsville, the nearest seaport, and 45 miles from the railhead at Cloncurry. The only water available was that obtainable by sinking wells. No power supplies or telephone communications existed in the area. The nearest hospitals and sources of food were at Cloncurry and Mount Isa.

The success that has attended the development of Mary Kathleen has primarily been because of the appreciation of the management to do first things first and to develop each phase of the project in ordered sequence and with planned timing.

Because of the remoteness of the location, priority of development was given to the construction of a township, the creation of a 3,400,000,000 gals. reservoir in the Corella River for water supply and the installation of temporary electricity generating sets. Early planning was also given to the construction of an ore treatment plant, which was to be about four miles from the town and one mile from the orebody.

Throughout the period of construction, work was also in progress on the orebody. This involved the cutting of roads to enable transport and machinery to reach the area of operations. Mining was to be by the opencut method, initially about 400 ft. above the nearby creek level. Originally, this was reached by a precipitous 1 in 5 track cut by bulldozer, but gradually roads were constructed

Drilling on the opencast orebody at Mary Kathleen



and opencast mining operations began on September 26, 1956. Over a five-day week mining operations produce 1,600 s.tons of ore and 3,200 s.tons of waste per day and some 250,000 tons of ore were stockpiled in preparation for milling, which was begun on June 3, 1958, the first oxide being produced on June 19.

Mining

The complicated network of mineralized bands, constituting the orebody and varying in thickness from a few inches to about 60 ft., includes considerable internal waste in the ratio of about 1 to 1 waste.

The orebody is such that its 300 ft. of vertical height above the valley floor can be conveniently mined by regular quarrying methods. Its plan dimensions will allow opencut operations to a further depth of about 200 ft.

A selective mining method to keep dilution to the lowest possible level has been devised. It incorporates shallow 25-ft. benches, small drill holes, and fairly low tons per ft. factors, small ore blasts, and shovel and haulage equipment of relatively small capacity and adequate manoeuvrability.

Benchs will always be retreated from west to east and this will allow bench floor widths to be as wide as possible in what is a relatively small opencut.

Approximately 4,000,000 tons of waste will be "lost" in a deep ravine, adjacent to the main haulage road, and the balance will be dumped over a saddle on the western side of the main valley.

Ore values are frequently intermixed with waste in the orebody. Accordingly, geologists monitor the "face" of the opencut and mark off the ore and the waste. All vertical drill holes, which are afterwards used for blasting the face, are "probed" and blasted selectively to break only ore, or only waste.

The material is loaded into Euclids from either the ore or waste piles of rock, and trucks are directed from the discriminator either to the mill or the appropriate dumping site.

The discriminator installation has been basically fabri-

A panoramic view of the Mary Kathleen property showing, from left to right, crushing plant, fine ore bins, grinding plant, extraction, neutral thickener and leaching plants. The ion exchange plant, distillate storage and power house follow in sequence. The sulphuric acid plant is seen at front right. Buildings at back right include truck service area, store, sundry trade and weld shops, change house, offices and laboratory

cated from A.E.R.C. Car Survey Equipment 1181B and consists of a battery of six geiger tubes, symmetrically placed on an arch-like framework, under which the truck load is brought to rest. The gamma sensitive G.M. tubes record the radioactivity of the truck load on a milliammeter and the grade is determined from a calibration graph.

Radio telephones play an important part in facilitating mining supervision. Supervisors' vehicles are each equipped with a unit and, to expedite general breakdown maintenance, there is a set installed at the discriminator and also at the garage workshop.

Treatment Plant

The treatment plant is an orthodox acid leach process, using conventional crushing and fine grinding equipment, counter-current decantation washing, ion exchange solution concentration, and alkali precipitation of the uranium.

The crushing plant has a design capacity of 275 tons per hr. from run-of-mine ore to a sized $\frac{1}{4}$ -in mill feed. Primary crushing is by a jaw crusher, secondary crushing by a Standard Symons crusher, and final crushing by a Short Head Symons crusher. Both Symons units are in closed circuit with two double-deck Tyler Tyrock screens.

Fine grinding is accomplished in a two-stage circuit utilizing one rod mill operating in open circuit, and two ball mills operating in closed circuit with low pressure cyclones. Designed capacity of the circuit is 1,000 t.ons a day from $\frac{1}{4}$ -in. feed to a finished product of 70 p.c. minus 200 mesh.

Pulp from the classifiers is dewatered from 32 p.c. solids to 60 p.c. solids. The thickened underflow is pumped to turbo-agitators where sulphuric acid is added. Acid is added at 50 p.c. strength to avoid temperature increases above the maximum permissible figure of 40 deg. C. An oxidant, ground manganese ore, is added when required.

Mining in the opencast



Solids-solution separation and washing are accomplished in a 5-stage counter-current decantation plant.

Clarification to a "gin" clear solution is carried out in two precoat filters. The clarified liquor is pumped to the Permutit ion exchange plant which is equipped with 12 vessels, each vessel loaded with 300 cu. ft. of synthetic resin.

Chloride elution is practised, the barren eluate being brought up to the correct chloride and acid strength by the addition of crude common salt and sulphuric acid.

The Porter elution technique, which is essentially a chloride recovery technique, is used for precipitation. The pregnant solution is pumped into agitators where finely ground limestone is added in sufficient quantity to precipitate the iron. The clear solution is separated from the precipitate and is transferred to other agitators where finely ground magnesia is added to precipitate the uranium. The solids are separated from the liquid and the uranium precipitate is washed and filtered before being extruded as pellets of washed "yellow cake" into an oil-fired continuous conveyor drier.

The dried precipitate is packed into 44 gal. drums for shipment. A feature of the Mary Kathleen uranium

mine and treatment plant is the very large proportion of the plant that was constructed in Australia, much of it being made by subsidiaries of British companies or to British designs.

According to the list of principal contractors the only part of the plant which came directly from overseas was the large ion exchange installation for the uranium extraction section of the mill, which was supplied by The Permutit Co. Ltd., of London.

For developing the Mary Kathleen mine, Atlas Copco air compressors were used, while for the opencut operations five 1½ cu. yd. shovels were supplied by Ruston and Hornsby (Australia) Pty. Ltd., and Blackwood Hodge supplied 16 15-ton Euclid rear dump trucks.

Jacques Bros. Ltd., of Richmond, Vic., supplied the primary jaw crusher, while Vickers Ruwolt Pty. Ltd., Richmond, Vic., supplied the secondary and tertiary Symons cone crushers, the Marcy rod and ball mills being supplied by Food Machinery (Australia) Ltd., S. Melbourne.

Responsible for the building and installation of the sulphuric acid plant at Mary Kathleen have been Simon Carves (Australia) Pty. Ltd., though the work was actually carried out by their subsidiary, J. R. Pillars Pty. Ltd.

The Westfield Project

THE Westfield site, on the borders of Fife and Kinross, about 2½ miles south-east of Loch Leven, is the largest opencast coal mining operation ever to be planned in Britain. The reserves of 25,000,000 tons of coal are sufficient to keep the site active for more than 20 years, and the workings will eventually penetrate to a depth more than twice as great as any yet achieved in this country.

Work on the site is still in the development stage. The large coal preparation plant and ancillary installations, capable of handling 1,000,000 tons of coal a year, are now nearing completion, and already over 4,000,000 cu. yds. of peat and sand have been pumped from the surface of the coaling area by the largest sectional dredger in Europe.

Although the site covers an area of about 920 acres, the greater part of this will be used only for dumping the earth moved from above the coal seams, and for the coal preparation plant and other buildings. The actual coaling area extends over about 270 acres.

There are four main seams to be worked, each consisting of a considerable number of leaves of varying quality. The seams outcrop on the western edge of the coaling area, dip steeply towards the centre of the area, and then rise more gradually towards the eastern edge. The dip is steeper in the north, where the ground is higher, and here the maximum depth to the lowest seam is about 800 ft. During the life of the site, the amount of material to be moved, including coal and overburden, is 125,000,000 cu. yds.

The southern part of the area is low lying, liable to flooding, and consists mainly of peat. Because of its nature, it was decided that the best method of removing the peat would be to dredge it and pump it to the disposal area. To do this the area was flooded and on the artificial

lake thus formed a dredger was floated. The dredger has a revolving cutter head 7½ ft. in dia.: this breaks up the peat, which is then pumped to the disposal area behind the embankments. The dredger is now to be modified to deal with a layer of sand underlying the peat, as this operation requires a different technique.

While dredging has been proceeding, the coal preparation plant and ancillary installations have been under construction. This plant will prepare the coal for the market. Because of the varying coal qualities in the seams to be worked, two large storage bunkers, each capable of holding 13,000 tons of coal, have been built: these will enable the raw coal to be blended in suitable proportions before passing to the washing plant. This blended raw coal, without passing through the washery, will also be supplied to the Westfield plant, being built for the Scottish Gas Board by Humphreys and Glasgow, Ltd. It will be complete by September, 1962, and it will then be producing 30,000,000 cu. ft. of gas a day, about one-fifth of the total gas requirements of Scotland. An earlier stage, producing half this figure, is expected to be operating by July, 1960.

In the washery, the heavier incombustible materials, shale, and so on, will be extracted from the raw coal, and the washed coal will be sized out into market grades.

Coal required for acceptance tests for the coal preparation plant will be won from an area in the north of the site adjacent to an area worked over ten years ago. When Westfield goes into production the first portion to be worked will be in the south, in the area now being dredged. Development of this area will, therefore, await completion of the dredging and the dewatering of the area.

Westfield is already known to gas engineers all over the world as Britain's first high-pressure coal gasification works, incorporating the Lurgi process. It marks a change-over within the industry from conventional carbonization of coal to the use of chemical processes. Because the gas will be made at high pressure, it will be possible to pipe it through a 133-mile grid main all over industrial Scotland. Further advantages of the new methods are claimed to be cheapness and the production of valuable chemical by-products: tar, ammonia, and benzole.

Work is beginning at Westfield, near Loch Leven, on the £6,600,000 gas plant which is to be fed by Britain's biggest opencast mine, and which, it is claimed, marks one of the greatest advances in the British gas industry this century. The site was formally inaugurated by the Minister of Power, Lord Mills, K.B.E., on October 24.

NUCLEAR RAW MATERIALS—II

Potential Uranium-producing Countries

APAPER presented by the United Arab Republic details results of geological and radiometric surveys in the Eastern and Western Desert. An area 90 kms. west of Cairo disclosed abundant geological exposures in benches and terraces incised in the thick cover of barren sands that characterizes the Western Desert as a whole. Eocene, Oligocene and Miocene sedimentary beds from a few to 60 metres thick lie below the sand and an intruded sheet of Tertiary basalt was encountered. A radiometric survey of this area disclosed higher than background Geiger-Muller counter readings over Oligocene shales which are attributed to the concentration of radioactive elements by the lignitic and other organic matter present in the shales. In the same area marked radioactivity was noted in narrow veinlets of quartzitic sandstone. On analysis uranium was found to be present to the extent of 0.3% U_3O_8 and a detailed aerial radiometric survey of the district has been commenced. Twenty boreholes are being drilled on the known occurrences.

In the Eastern Desert, an area between the Red Sea Coast and a major granitic intrusion is abundantly endowed with radioactive phosphate rocks. In the course of prospecting a large mineralized fault zone was discovered where outcropping ore assayed 0.02% U_3O_8 . Detailed core drilling of this zone is planned.

Uraniferous bands of marls or altered shales have been located at two places in this area. Pitting has disclosed the continuity of the bands over wide areas and a uranium content of 0.025% U_3O_8 . These deposits are estimated to contain over 4,000 tons of uranium oxide.

Prospects for Japan

Systematic uranium prospecting commenced in Japan in 1954 since when about 40 new uranium occurrences have been found. These deposits are all in the granite massif regions which occupy 20 to 30% of the area of Japan. The principal discovery was located in 1955 by aerial and airborne radiometric survey of the Ningyo-toge district. Subsequent prospecting by trenching, pitting, drilling, drifting and geochemical methods has disclosed a horizontally stratified deposit extending intermittently about 8 kms. east and west and 1 to 3 km. north and south. About 12,000 feet of drilling and over 10,000 feet of drifting have been carried out on the deposit.

This principal deposit occurs in the basal conglomerate of Tertiary sediments resting unconformably on the granite basement rocks. Uranium is not uniformly distributed throughout the conglomerate but is related to the distribution of organic matter and pyrite. Some of the richer parts of the orebody contain up to 3% U_3O_8 but the tenor of the deposit throughout averages 0.05% and there are an estimated two million tons of ore of this grade. The uranium minerals present are autunite and a newly identified hydrous uranium calcium phosphate mineral, ningyoite.

The first occurrence of uranium mineral in non-pegmatitic deposits was discovered in August 1954 at the Miyoshi mine in Okayama prefecture. Since 1956 the Japanese Atomic Fuel Corporation have been proving the deposit by underground work and diamond drilling. The deposit formerly worked for wolfram consists of a large number of small parallel greisen quartz veins in granite carrying zeunerite and coffinite with other economic minerals. Seven other mines in this locality,

The following article, the second of a series, assesses the potentials of uranium production possessed by Egypt, Japan and Spain.

mostly copper producers, have disclosed radioactive anomalies. No significant Japanese uranium production is anticipated before 1960.

Uranium Mining in Spain

Radioactive minerals were discovered in the pegmatites of Sierra Albarrana in 1939 and small amounts of beryl and uranium minerals were produced as by-products during the Second World War when the deposits were intensively worked for their mica content. In 1949 uranium mining operations began, as pockets of high grade uranium ore up to half a ton in quantity were then being frequently discovered. The minerals were mostly brannerites with some uranites and pitchblende. With deeper working the pockets became less attractive both in volume and content and with the discovery of more promising lode deposits elsewhere in Spain the uranium workings were suspended in 1954.

Systematic investigation of uranium occurrences began in 1954 with a detailed survey of the Santuario-Cardena region. Workings on a number of sub-vertical lodes on the central and marginal zones of a granite batholith have been examined and mining operations commenced on one of the lodes.

Simultaneously prospecting work was commenced in the granitic zones of the provinces of Salamanca and Zamora close to the Portuguese border, and in the vicinity of the major Portuguese lodes worked for uranium. Shallow workings have been established on a number of promising lodes and drilling programmes are planned. Abundant pyrite and lead/zinc mineralization with uranium make operations on some of these lodes attractive but insufficient work has yet been done to establish reserves. An extraordinary abundance of radon made the use of counters and scintillometers impracticable in some of the workings.

In the provinces of Caceres and Badajoz similar deposits to those of Santuario-Cardena are found in granite and slates. Various veins have been examined to a maximum depth of 50 metres and some interesting and extensive uraniferous veins have been discovered. Shaft-sinking is at present in progress on two such lodes.

Considerable reserves of radioactive quartzite of Silurian age are found at Despenaperros. Quartz forms between 30% and 80% of this rock which carries the heavy minerals zirconium, rutile and ilmenite-leucoxene to the extent of 13% to 60%. Economic treatment of this material does not at present appear possible. The uranium oxide content is over 0.05% and the mean of mine outcrop samples disclosed 5.72% ZrO_2 together with 17.76% titanium oxide and some thorium.

Some Spanish uranium production has been made from the Monesterio district where uranium-bearing lodes were worked in the First World War. The lodes occur in granite and carry uranium associated with graphite and calcite. The veins are to be tested in depth by drilling.

Currently preliminary work is being carried out in preparation for the detailed prospecting of the Mentrída area, north of Toledo, where some interesting radioactive anomalies have been discovered.

Steam-operated winches for stage winding at Parkside

HIGH-SPEED shaft sinking, even more than high-speed driving, requires the successful co-ordination of all phases of the working routine and in the construction of these circular shafts the contractors have attained a high degree of integration, dividing operations into a cycle of five distinct phases. The success of the integration of these phases is reflected in recent achievements at Parkside when over 260 ft. of sinkage were achieved in each shaft, the best advance being made in No. 1 shaft in September, when the progress amounted to 310 ft. of which 306 was lined.

The sinking routine is governed by the necessity to keep the minimum length of shaft wall exposed at one time and thus follows on shutter advances of 15 ft. brought up closely behind the face.

The shafts are 24 ft. finished internal diameter and are mass concrete-lined, this lining following closely behind the face. Outstanding features in the shaft sinking routine include the use of a pneumatically-operated cactus grab loading kibbles at the rate of 100 tons per hour, and contributing to this high mucking rate is a lazy chain method



ropes reeled on a four-drum capstan hoist, steam driven and capable of raising a total load of 40 tons at 10 ft. per min. when operating at 80 p.s.i. On the bottom deck of this stage is located the termination to the stage manifold and air and water connections for the grab, drills and other pneumatic equipment. The central deck carries six 5-ton hand-operated winches for hoisting or lowering the shutter assembly and an "octopus" distribution box from which are led off four 6-in. dia. hoses which supply concrete to the shuttering.

South African High Speed

of dumping the kibbles or hoppits at the shaft top, whilst the use of parallel circuit firing substantially reduces the time lost due to rounds hanging up through damaged detonator leads.

The main equipment in each shaft consists of a three-deck circular stage or scaffolding of 22 ft. dia., the height of this unit being 32 ft. 6 in. with 15 ft. clearance between decks.

The stage is raised or lowered to its required position in the shaft by four in line $3\frac{1}{4}$ in. circumference locked coil

At Newton-le-Willows, Lancashire, the Parkside Colliery is being developed by the National Coal Board No. 3 Area, North Western Division. Work on the surface installations is proceeding according to schedule and substantial progress is being made with the sinking of two 24 ft. dia. mass concrete-lined shafts. The main contractors are Kinnear Moodie and Co. Ltd., who have retained the services of Roberts Construction Co. Ltd., to advise upon the application of South African techniques to the particular conditions of the area. The team of 12 South African experts is led by Mr. C. McLauchlan, who is acting as technical adviser for the project. The shafts will eventually be 2,595 ft. deep and are carried through 10 ft. of glacial drift, 30 ft. of Manchester Marl and 80 ft. of barren Upper Coal Measures, the remainder being in the Coal Measures. Major seams cut include the Crombouke, Rams, Upper and Lower Floridas, Wigan 4 ft. and the Trencherbone. The area is bounded by the Warburton Fault to the north and the Winwick Fault to the west.

The grab assembly, which pivots concentrically around the shaft, is located below the bottom deck of the scaffold and is supported by an inner and an outer monorail located on strengthened sections of the scaffold. Its main framework comprises an operator's cabin and a rectangular base on which a 25 b.h.p. Pikrose air-operated hoist is located for raising and lowering the 20 cu. ft. pneumatically-operated Priestman Cactus Grab which is able to transverse radially across the shaft.

The double-shelled steel shuttering used to support the emplacement of the shaft lining consists of five circular rings, the lowest being known as the kerb shutter.

The shaft sinking routine falls into five separate stages and is based upon 15-ft. shutter advance after every second or third round.

Thus, after a round has been fired and levelled giving room for a further ring of concrete, the stage is lowered, steel tapes are hung on their brackets, unreeled as the stage moves down and are left ready for levelling the kerb. The scribing boards of the kerb ring are loosened and retracted and the insert holding the kerb rigid is withdrawn after the winch ropes have been applied. The kerb is then lowered 15 ft. and the weight of the ring is transferred to the wall slings.

When the kerb shutter is dropped, the 15-in. wedge insert is immediately replaced and bolted firmly and the shutter is plumbed to concentricity and levelled by means of the tapes and is secured by timber distance pieces, after which the scribing boards are placed securely against the sidewall and the scribing ring tensioned up. While this work is in progress, extension hoses are lowered through the stage and the "Octopus" hoses which carry the concrete are fitted into the spigots. The scribing boards are fitted, paper



from concrete sacks being used to plug any crevices. Concrete is then passed down the 6 in. dia. pipe from surface to the distribution box on the centre deck. A kettle or boiling box is sited in the shaft at the bottom of the line and this has been found to overcome any tendency on the part of the concrete to segregate. The general mix used for the lining is 0.600 water/cement ratio resulting in an average compressive strength of 2,800 lb./sq. in. at seven days. Due to the frequency of the shutter advance, very rapid hardening is required and to this effect 2 per cent

Eight C.P. class T compressors are used on the project

When completed, the round is charged with 220-lb. polar ammon gelignite, standard I.C.I. $\frac{1}{4}$ sec. delay detonators being used. These are fired in a parallel circuit connected up to inner and outer buss bars, these comprising two 7 x 0.036 dia. strand wires. The explosive ratio of 2.75 lb./cu. yds. ensures maximum fragmentation and normally the round pulls for the whole of the 6 ft. drilled, together with a little overbreak. A high degree of fragmentation, with the elimination of any large boulders, is essential to efficient working of the grab. Smoke clearance normally takes some 30 mins. ventilation in the shaft being provided by two Woods of Colchester Aerofoil axial flow mine fans.

When smoke clearance is complete, the fourth stage begins and this consists of lowering the scaffold again, followed by an examination of the shaft wall which is then dressed down. After scaling has been carried out, mucking proceeds and at the same time temporary steel support rings are fitted to the sides of the shaft as the muck is lowered. Finally, the sump is blown over and drilling proceeds in a fifth stage followed by charging and firing to complete the cycle.

Shaft Sinking in Britain

by weight of calcium chloride to cement is added in 3 gal. solutions to each cu. yd. of concrete in the weigh batching plant at surface.

Completely effective vibration during placing is essential as when set the lining must be of uniform compressive strength to deal with the ring stress induced. Vibration is carried out by Consolidated Pneumatic type 325 poker vibrators, each of these units producing some 8,000 complete vibrations per minute and having a vibrating capacity of some 40-50 cu. yds. per hour at an air consumption of 50 c.f.m. at 90 p.s.i.

When the first ring of concrete has been poured, the balance of the shuttering is lowered and at the same time the temporary support rings fitted during a previous shift to prevent scaling of the shaft wall, are removed.

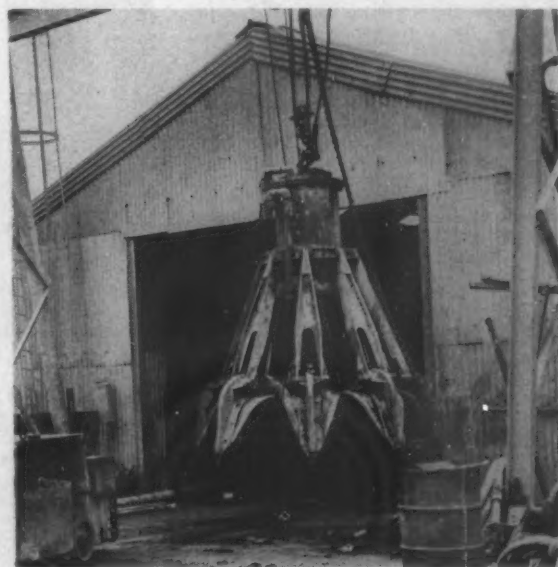
In the second stage, the scaffold or circular stage, is raised a short distance up the shaft to the mucking position and is secured to wall slings. After the stage has again been centred and jacked firmly to the sides of the shaft, mucking or "lashing" recommences and is normally completed in some 3½ hrs. When this is effected, the exposed sump is blown over by compressed air from a 2-in. flexible hose and prepared for drilling operations. The scaffold is then lowered and the third stage consists of drilling and charging, completing concreting operations and flushing the concrete pipes.

Drilling of the wedge cut and round is carried out with Holman "Silver Three" drills using $\frac{7}{8}$ -in. hexagonal steel and 1½-in. detachable tungsten carbide-tipped chisel bits.

The face crew on each shift comprises 12 men and a foreman in the sump and a concreting crew of eight, covering a face advance of up to 300 ft. per month. The analysis of the crew is:

During mucking: Foreman, 1; Charge hand, 1; Grab operator, 1; Onsetter, 1; Handling kibbles, 6; Dressing down, 3.

During drilling: Foreman, 1; Onsetter, 1; Drillers, 10.



A cactus grab under test after servicing on site

Machinery and Equipment

British Crawler Tractor Moves the Earth

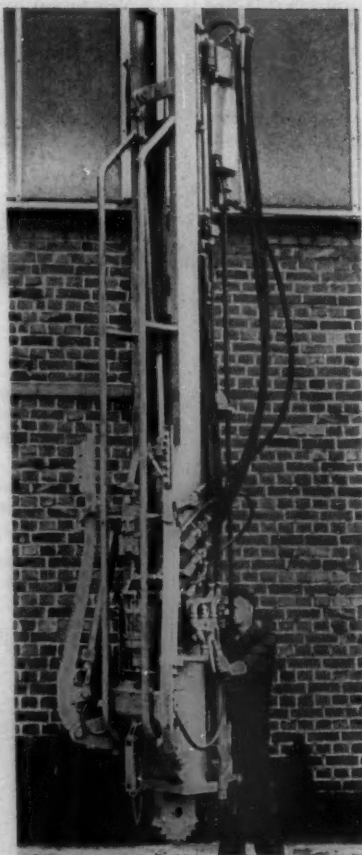


British earthmoving history was made earlier this month at a large quarry near Swanscombe, Kent, when a three-day demonstration presented by Fred Myers Ltd., Caterpillar dealer in London and Southern England, showed the Caterpillar D8 tractor, series H to the Press and the public. The D8-H, manufactured at the new Glasgow works of Caterpillar Tractor Co. Ltd., constitutes the first production of crawler tractor equipment by Caterpillar outside the United States. Indeed, *The Mining Journal* was informed that the Cat. D8-H will not be produced in the U.S. before early 1959.

Operational tests held during the demonstration provided a comparison between the working efficiency of the new series H machine and its predecessor, the series F. On timed tests over 75 ft. push and 150 ft. push, the series H showed an increased bulldozing efficiency of 25 per cent; while in push-loading a lowbowl scraper, efficiency increase was recorded at 23.5 per cent.

Statistics relating to the series H machine reveal a drawbar pull of 178 h.p. and an engine h.p. at flywheel of 225. Forward travel speeds at rated engine r.p.m. grade from 1.5 m.p.h. (132 f.p.m.) to 6.3 m.p.h. (554 f.p.m.) These provide a maximum drawbar pull of 51,670 lb. and 9,950 lb. respectively. In reverse, the corresponding figures are 1.5 m.p.h. (132 f.p.m.) to 6.4 m.p.h. (563 f.p.m.) at 51,670 lb. to 9,800 lb. The engine is a four-cycle, turbo-charged valve-in-head 6-cylinder diesel. Governed at full load, 1,200 r.p.m. is developed; at a maximum drawbar pull 900 r.p.m. is developed.

Above, in centre of page, is the Salzgit-ter BG 3 drilling machine. Below, the Beien fully automatic face



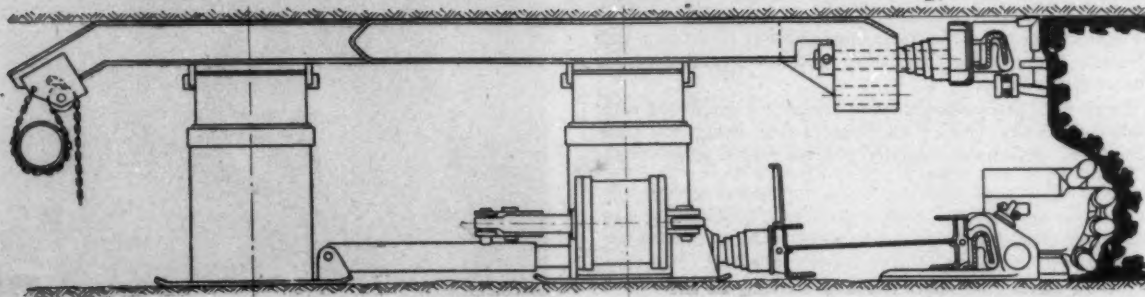
Above, at left, a Caterpillar No. 463 low-bowl, four-wheeled scraper is towed and push-loaded by two British-built Cat D8-H crawler tractors. Above, at right, the timed test between the new series H machine and the series F

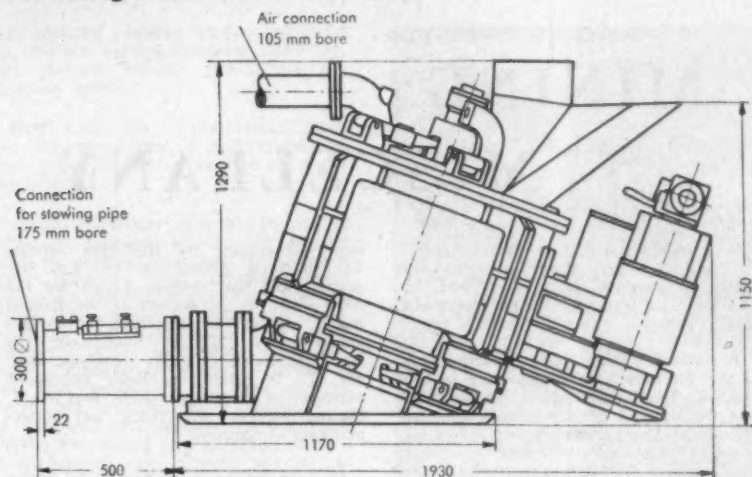
The unit is equipped with six rollers on each side, 39 shoes of 24 in. standard width, the length of the tracks on the ground being 114½ in. and the area of ground contact with the 22 in. track shoes being 5,046 sq. in. The Cat. D8 series H tractor is 17 ft. ½ in. long, 7 ft. 10 7/14 in. high, 9 ft. 1½ in. wide and has a ground clearance of 19½ in. Its operating weight is approximately 46,734 lb. and its shipping weight about 45,734 lb.

Mention of shipping promotes the realization that the Cat. D8-8 can be sold direct from the U.K. or from the United States, depending on currency area. The tractor obviously has wide-spread applications in opencast mining, quarrying, mine surface development, stockpiling and the like. It is possible, therefore, to envisage it working both at home and overseas, in coal- or metal-winning operations. A notable application at the moment is stated to be its employment by contractors operating in this country for the N.C.B.

THE ESSEN EXHIBITION, 1958

One of the wide range of drilling machines on show at the Essen exhibition of mining machinery was the Salzgit-ter BG3 drilling machine, designed for the drilling of blast and pilot holes in shafts and winzes. The drill is of the increasingly popular rotary percussive type and is capable of drilling up to 3.5 m. holes without rod change. In





The Beien stowing drum type ST 150

operation, the entire drill unit and frame is suspended by a steel rope from the headframe, or in deep shafts from the stage.

When setting up the machine on the shaft bottom, stability and alignment during drilling is ensured by two hydraulically operated legs which swing out and together with the toothed central projecting bar form a three-point supporting system. The large weight of the machine and the powerful drilling unit make for high torque on the rods and an integral hydraulic cylinder facilitates setting and removal.

In addition to the main suspension arrangement an integral oil cylinder enables the entire unit to move vertically a maximum of 1.5 m. independently of the main suspension, and this accommodates any unevenness in the shaft bottoms.

Continental experience with this machine suggests that labour costs are lower than with smaller drills, for even in the largest diameter shafts, three drills only are required, with two operators per machine. The machines are fully automatic and can drill holes up to 120 mm. in dia. Advantages claimed for the BG3 are high-drilling rate; extreme accuracy of hole alignment; no rod changing; high torque prevents jamming in hole and permits holes up to 120 mm. dia.

Technical data relating to the machine is, overall length, 5.2 m., length of legs, 1.65 m., angle of rotation of legs, 75 deg., and overall weight, 1,800 kg.

One of the disadvantages of the normal coal plough is that frequently the overhanging coal does not easily fall after the bottom section of the seam has been removed: this has proved a stumbling block on several fully automatic faces, i.e., longwall faces on which men are not employed either in the winning of the coal or in support operations. In order to permit automatic faces in those seams where the top section does not fall easily, Maschinenfabrik A. Beien of Herne, Germany, have introduced an integrated support and ploughing unit, consisting of two ploughs, chain conveyor and self-advancing pneumatic-hydraulic supports and rams. The entire unit can be operated by remote control and a device is incorporated which synchronizes

the forward travel of the ploughs and the advance of the supports.

In essentials the extraction unit consists of two ploughs travelling in opposite directions; the lower plough being attached to the side frame of the chain face conveyor as with normal ploughs, whilst an additional plough travels along a frame attached to the face end of the roof bars as is shown in the illustration. The roof supports consist of two telescopic props (together with articulated roof bars) which are connected by a horizontal pneumatic ram. This also serves as a pusher to move the conveyor forward as the face advances. The face supports are thus completely integral horizontal and vertical units, and by appropriate valve manipulation, they can be advanced to keep the conveyor and the plough tightly up to the face, and still perform the essential function of supporting the immediate roof.

There has been a steady increase in the application of pneumatic stowing in the last few years, both in coal and metal mines. The growth of high capacity installations has imposed on stowing machines extremely high requirements for hourly throughput, air consumption, working safety and efficient dust suppression. These demands, alongside the technical advances in the paddle wheel

machines which have been used successfully for decades, led to the development of the Beien Stowing Drum.

The external design of the drum is described as: length, 1,930 mm.; height, 1,290 mm.; and width, 1,100 mm. Hourly throughput is 150 m³ stowing material, and drive through the Beien compressed-air motor ZK 20g (24 h.p.). The electrical drive (max. 22 kW.) can be arranged.

The stowing drum is of simple design for easy supervision, and requires minimum maintenance and servicing. The vertical drum wheel rotating around a fixed axis is provided with five receiver pockets sealed on all sides. The air for stowing is conducted through these pockets from the top to the bottom and this ensures complete evacuation even of sticky fines from the pockets.

The machine is adjusted hydraulically by oil pressure operated by a hand pump and an adjusting cylinder at the top end of the drum shaft. The cylinder is connected with the devices for adjusting the top and bottom sealing plates. For sealing the drum wheel replaceable packing rings are provided which are forced automatically by compressed air against the front ends of the drum.

A special advantage of the Beien Stowing Drum Type ST 150 is in the simplicity of design which enables worn components to be easily replaced on site underground. Thirty-five per cent of Ruhr coal faces are now pneumatically stowed.

Included in the impressive display of Demag products was the retracting-chute tippler (schaufelwipper). This tippler was designed originally to fit the needs of the Emu Mayrisch mine in Germany, where space limitations precluded the use of the normal type of tippler.

Essentially the schaufelwipper consists of a tippler and an integral chute. During the initial 90 deg. movement of the tippler the chute is motionless but as the tippler continues to revolve through the next 75 deg. to its final discharge position, the chute is retracted automatically. Thus the distance through

The Demag Schaufelwipper



which the ore falls is very much less than with the normal tippler discharging on to a static chute or into a bunker. This is of great importance if a fragile mineral such as coal is being discharged where size of product is often directly related to selling price.

Another advantage of the schaufel-wipper lies in the fact that there is a gradual continuous flow of mineral down the chute, so facilitating loading of the transport system in to which the chute discharges. The tippler is powered by a 24 kW. main motor and an additional 4.1 kW. motor is incorporated to permit close adjustment of the tipping action. The angle of chute slope can easily be varied to suit the ore being handled.

LIMESTONE MINING IN CALIFORNIA

Operations at a California mine that employed block-caving methods for nearly a quarter of a century in producing more than 7,000,000 tons of limestone are described in a recent U.S. Bureau of Mines report.

Block caving is seldom considered applicable to such a structurally strong rock as limestone, and the Crestmore mine, operated by the Riverside Cement Co., is the only one in the United States ever to employ it for mining limestone.

According to the report, the Crestmore mine used block caving from 1930 until 1954, then switched to an open stope, room and pillar system. The underground rooms now are 60 ft. wide and 200 ft. long, without support. This indicates the great strength of the limestone.

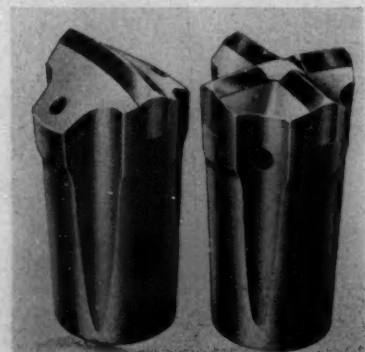
A full report of these operations is contained in the U.S. Bureau of Mines Circular 7838.

A NEW RANGE OF DRILL BITS

A new range of tungsten carbide-tipped percussive drilling bits has been introduced by Victor Products (Wallsend) Ltd. The new bits, the single chisel and cross types for $\frac{1}{4}$ in. and 1 in. hexagonal drill steels, are designed for operation where solid-tipped steels are unsuitable.

The chisel type is $1\frac{1}{4}$ in. dia. and $1\frac{1}{2}$ in. dia., both sizes tapering at 7 deg. The cross type is produced in five diameters, namely $1\frac{1}{4}$ in., $1\frac{1}{2}$ in., $1\frac{3}{4}$ in., $1\frac{1}{2}$ in., and $1\frac{1}{4}$ in. In the $1\frac{1}{4}$ in. size, taper is 12 deg., while in the other sizes in the cross-type range, taper is 7 deg.

The single chisel and cross type bits by Victor Products (Wallsend) Ltd.



MINING MISCELLANY

It is understood that a party of American geologists arrived in Colombia recently to examine the coal deposits at "El Cerrejon" in the Guajira Peninsula of Colombia.

A seven-year plan for the development of the Yakutia diamond industry in the U.S.S.R., has been drafted. It is stated that the volume of production will not only meet home demands for industrial diamonds and jewellery but will also leave enough to spare for exports. A mechanized river port is to be built on the middle reaches of the River Lena to handle cargo for the diamond industry.

Otokumpu Oy is reported to have started operations on a new nickel mine in Kotalahti, Leppavirta, Finland.

A copper deposit has been discovered at Gaisk, some ten miles from Orsk, in the southern Ural region of Russia. A concentrator is being set up in the district which will supply local copper smelters with copper concentrate.

Two Belgian coal pits in the Borinage basin, south of Mons, will be closed by December 31 next. They are among the five pits in that basin belonging to the Cokerill-Ougree Steel Combine. They cannot be operated profitably any longer. The 560 coal-face workers employed in the pits will be sent to other mines. There is no solution yet for the future of the 460 surface workers. Last year's coal output of the two pits was about 230,000 tons.

A geological survey of the Archangel region of the U.S.S.R. has revealed large deposits of bauxite and coal. The Technical and Economic Board of the Archangel area is preparing a plan for the exploitation of these deposits and intends to develop the north into an important mining area.

Copper metal produced from July, 1957, to June, 1958, totalled 46,344 tonnes, according to figures published by the Philippine Government's Bureau of Mines in its annual report.

Geologists have discovered several new iron ore deposits in the Ukraine, which will add considerably to the resources of the Russian iron and steel industry. High-grade ore beds similar to those at Krivoy Rog have been found near Kremenchug. They occur in vertical strata, resembling giant pillars, and run very deep into the earth.

A gold nugget weighing 5 kg. 180 gm. (more than 11 lb.) has been found at one of the Lena goldfields in Eastern Siberia. Nuggets of 10-12 kg. have been found there in the past. Russia's biggest nugget was found in the Urals last century. It weighed 36 kg. 21 gm. (nearly 80 lb.).

A new underground ironstone mine is being developed in the parish of Easton,

near Grantham, by the Ore Mining Branch of the United Steel Co. Ltd. Site preparation has already begun on the new mine, to be known as the Easton mine. It will be the first to be developed by United Steel on the Northamptonshire sands ironstone bed. Mr. T. W. Hall has been appointed manager of the Easton mine, and Mr. J. Darragh takes his place as under-manager at Santon.

Germanium has been discovered in the Powell River area, about 80 miles north of Vancouver. Taiga Mines Ltd., a British Columbia company, incorporated two years ago to engage in copper mining on Vancouver Island, has staked some 100 claims. The germanium is found as fossils in the sandstone and slates of the walls bordering Lang and Kelly creeks.

The value of South African stores consumed by the gold mines in 1957 was £94,300,000, according to the Chamber of Mines annual report issued recently. The value of imported goods and materials was £10,800,000. The corresponding figures for the coal mines were £4,000,000 and £1,100,000.

The Hanna Coal and Ore Corporation of America, which earlier this year carried out a preliminary survey of iron ore deposits in the South-eastern Province of Sierra Leone, does not intend to continue the exploration programme at present, states Barclays Bank D.C.O. The Corporation came to this decision because of the present economic situation of Sierra Leone, and due to an apparent lack of quality and quantity in the deposits believed to exist in the area. It is possible that the Corporation may seek to continue the operations in Sierra Leone at a future date.

The mining areas in the Ruanda-Urundi and the Kivu, Belgian Congo, are experiencing a difficult period. Already affected unfavourably by the remoteness of seaports, the absence of cheap electric power, and the fact that deposits are widely scattered, these regions are seriously hit by the price deterioration on the world's metal exchanges and the restrictions imposed under international agreement. As a consequence, operators in the principal mining districts of Ruanda-Urundi have been considering the feasibility of a merger with a view to reducing exploitation costs and rationalizing the power which will become available from the Taruka power station now under construction in Ruanda.

Austria is to import 1,080,000 tonnes of coal and 186,000 tons of coke in the last quarter of this year compared with 1,160,000 and 145,000 in the last quarter of 1957. According to the Austrian Ministry of Trade, coal imports from East bloc countries are to be increased this year with a view to reducing the

high clearing balance Austria has built up with the eastern European countries, and increase export possibilities for Austrian goods.

Eagle-Picher Co., of the United States, has announced that it will reopen its Henryetta, Oklahoma, smelter on about December 1.

A new company may be formed in Chile by Japanese interests to develop iron ore deposits to supply the Japanese steel industry. The Japanese group comprises, the Mitsubishi Shoji Trading, Mitsubishi Shipping, Mitsubishi Shipbuilding and Engineering and other interests. Since 1956, these companies have conducted an extensive survey of the iron mines in the area of Las Adrianitas, near the city of Copiapo. It is estimated that deposits contain about 20,000,000 tonnes of high-grade ore. It is planned to ship between 300,000 and 350,000 tons of ore to Japan annually, later rising to between 700,000 and 1,000,000 tons a year. The Japanese group are to construct two ore carriers of 35,000 tons dead weight, to be used exclusively for transporting ore from Chile to Japan.

The Malayan Tin Bureau was an exhibitor at the 40th annual National Metal Exposition and Congress held at the Cleveland Auditorium from October 27 to 31. Important examples of new and expanded uses of tin were shown through the co-operation of the Bell Telephone System, the Convair Division of General Dynamics Corp., Chrysler Corp., the Philco Corp., the Copper and Brass Research Association, Thompson Products Inc., and others. The exhibits included samples of alloys, plate and solder used in the fields of nuclear energy, aeronautics, automobiles and tractors, and electronics.

We would like to congratulate the publishers of *The Globe and Mail* for their enterprise in launching an overseas edition, the first issue of which appeared this month. The development is a very welcome one to all in the United Kingdom who are interested in Canada and Canadian affairs.

PERSONAL

Mr. A. T. Holman, the chairman and joint managing director of Holman Bros. Ltd., has relinquished his office of joint managing director as from October 1, 1958, for health reasons. Mr. Holman will be remaining on the board, and will continue to act as chairman.

Mr. G. F. A. Burgess has been appointed a director of the Esperanza Copper and Sulphur Co.

Mr. A. J. Trebilcock has retired as president of the Toronto Stock Exchange, having reached the official retirement age of 70. He will continue with the exchange in an advisory capacity. The chairman of the board of governors, Mr. J. G. K. Strathy, will succeed Mr. Trebilcock as president in addition to his present duties as chairman.

Mr. C. A. Wight, former head of the London office of the Bankers Trust Co., has been named president of Freeport Sulphur Co. Mr. Wight succeeds Mr.



A mining operation for vermiculite in the workings of the Transvaal Ore Co. Ltd., on the Palabora deposit, 240 miles north-east of Johannesburg in the Transvaal. The vermiculite ore reserves at present being worked at Palabora exceed 100,000,000 tons

Williams, who became board chairman as well as president in 1957 when Mr. J. H. Whitney resigned as chairman to serve as U.S. Ambassador to Great Britain. Mr. Williams will continue to be chairman and chief executive officer.

Dr. G. A. Schnellmann left London recently to pay professional visits to Iran and India. He will be returning towards the end of this year.

Mr. W. G. Yuill of Mackay and Schnellmann has left London for Iran.

Mr. D. Simmons of Mackay and Schnellmann's Teheran office is paying a short professional visit to India.

Sir Joseph Ball, K.B.E., has decided to resign from the boards of London and Rhodesian Mining, and Land Co., Ltd., and its subsidiary, the African Investment Trust Ltd.

Mr. R. C. Meaders has been appointed assistant manager of the Mining, Crushing and Process Machinery Division of Nordberg Manufacturing Co., Milwaukee, Wisconsin, U.S.A. Mr. Meaders was vice-president of Aerofall Mills, Inc., Columbus, Ohio, prior to joining Nordberg.

COMPANY EVENTS

At a meeting in Dusseldorf on October 18, a European Federation of Purchasing (Fédération Européenne de l'Approvisionnement) was formed. The founder members of the Federation are: Bundesarbeitsgemeinschaft Industrieller Einkauf (Germany), Compagnie des Chefs d'Approvisionnement (France), Nederlandse Vereniging Voor Inkoop-Efficiency (Holland), Purchasing Officers Association (United Kingdom), Svenska Inköpsledares Forening (Sweden).

The next general meeting of the North Staffordshire Institute of Mining Engineers will be held on November 3, 1958, at the North Staffordshire Technical College.

Wickman Ltd., have acquired a majority holding in Brasmac Industria e Comercio S/A, Sao Paulo, Brazil, with a view to furthering the Wickman Group's exports to, and expanding its Tungsten Carbide interests in, this growing industrial market.

As from November 3, 1958, the address of the Central Mining and Investment Corporation Ltd., and Central Mining Finance Ltd., will be 1 London Wall Buildings, London, E.C.2. The telephone and telex numbers and telegraphic addresses remain unchanged.

CONTRACTS AND TENDERS

Comhairle Chonndae Lughbhaidhe (Irish Republic)

Supply and delivery of a deep rock drilling machine for quarry work. The machine should be capable of drilling a 4 in. hole at any angle. Tenders should be sent to, C. O'Clearachain, Runal, County Offices, Dundalk. Closing date, November 8, 1958. Ref. E.S.B./26411/58. Telephone inquiries to Chancery 4411, extension 738 or 771.

An order has been received by the Westinghouse Brake and Signal Co. Ltd. from the National Coal Board Durham Division for underground locomotive signalling equipment for controlling approximately 26 locomotives hauling trains of mine cars and man-riding cars over approximately 24 track miles in connection with a combined mine scheme. The system adopted is one which is driver-operated and is fully signalled with relay interlocking, and includes approximately 90 colour-light signals and 42 sets of power-operated switches. A track diagram will also be provided for use in the dispatcher's cabin at the approach to the central drawing shaft on each of the two levels. All the equipment to be used is certified as safe for use in gaseous mines. This is undoubtedly the largest single underground locomotive signalling system ever to be considered and adopted for British mines.

Metals and Minerals

Inco's Nickel Stocks

There is still no indication of any settlement of the strike at INCO's Sudbury works, which at the time of writing has been in progress for about a month. The company's chairman, Dr. John F. Thompson, said in London last week that sufficient stocks were in hand to meet the requirements of regular customers for approximately six to eight months, depending on how rapidly demand improved. From this it seems reasonable to infer that INCO would be in a position to assist other producers with smaller stocks, in the event of any shortage arising from a substantial improvement in demand.

In view of the comfortable stock position there is obviously no incentive for the company to end the strike at the cost of concessions which it would regard as unjustified, more especially as INCO is already paying the highest wages in the industry and any further increase could scarcely be contemplated in the existing conditions of over-production.

Consumers are further insulated against the consequences of a prolonged strike by the stocks held in suspense by the U.S. Government, which are available to meet any demands in excess of normal commercial supplies. The Office of Civil and Defence Mobilization has announced that 50,000 s.tons of nickel scheduled for shipment to the Government in 1959 will be diverted to commercial users. This amount is presumably additional to the 67,500 s.tons which, it was forecast about a year ago, would be available in 1958. On the debit side, it is understood that the U.S. Government has sold a certain amount of Cuban nickel this year to commercial users, but the quantity involved was probably not very great. If these various assumptions are correct, stocks of nickel outside the stockpile, including all North American producers' stocks, should total at least 150,000 and possibly 175,000 s.tons.

An interesting point in connection with the U.S. Government's suspense stocks is that, although consumers in Britain no longer have any doubts as to the availability of nickel, American industrialists have yet to be convinced that they can safely design this metal into new products without again running into problems of supply. These contrasting outlooks, which on first thought, may seem surprising, spring from the different considerations on which British and U.S. users have to base their forward planning, inasmuch as American users operate on such a large tonnage basis that they are reluctant to make any major changes in materials until they can be assured of adequate supplies for a considerable period ahead. Washington has, therefore, been encouraged not to immolate these nickel stocks, so that consumers may have visible proof that the reserves are more than adequate.

INCO does not appear to be greatly concerned about the stock position and clearly expects demand to improve quite quickly, following the upturn in the U.S. economy about mid-year. Particular at-

tention is being paid to the development of new stainless steel uses, a significant pointer to future prospects being the amount of new capital which the American steel industry is investing in new stainless steel capacity. According to Dr. Thompson, stainless steel, which at present accounts for about 30 per cent of nickel purchased, promises the biggest potential outlet for nickel, but considerable effort is also being applied to the introduction of other new uses. Nickel-plate accounts for between 15 and 18 per cent of consumption, the third largest outlet being in constructional alloy steels.

Dr. Thompson expressed himself as optimistic regarding nickel requirements in 1959, but said that the company had no immediate plans to reinstate any of the cutbacks in production. The company's nickel operations are at present running at an annual rate of about 200,000 s.tons, against a maximum rated capacity of about 310,000 s.tons. It is sold out of copper, but future operations will be determined by the demand for nickel and copper will remain a by-product.

On the subject of platinum, Dr. Thompson said that the market was in a very depressed state, the supply position being dominated by cheaper Soviet offers. It was the general belief that the Soviet sales were prompted by the need for "cash" and that they would probably be withdrawn when sufficient foreign currency had been realized.

OUTLOOK FOR SILVER

With the open market price still at 90½ c., U.S. domestic business has been in the region of 250,000 oz. daily and upwards. Sellers have not been pushing sales too aggressively owing to the threat of a possible strike of mine workers in Mexico in support of higher wages and other benefits. Mexican producers have for the most part been losing money on operations and maintain that no concessions can be granted unless the government reduces export taxes.

U.S. output of recoverable silver from domestic mines declined 7 per cent in August and was 24 per cent below that of August, 1957, reports the Bureau of Mines, U.S. Department of the Interior.

The Philadelphia Mint has received \$4,000,000 worth of silver coins from the State Bank of Ethiopia in repayment of U.S. lend-lease funds.

BERYLLIUM'S TECHNICAL PROGRESS

On both sides of the Atlantic the technical development of beryllium continues to progress apace. In Britain new advances in experimental work in the fabrication of this metal have been announced by Tube Investments. They include the drawings of what is believed to be the longest small-bore beryllium metal tube yet produced. The bore is 0.30 in., the wall thickness 0.04 in., and

the tube between 2 and 3 in. long. At the other extreme, beryllium tubes having wall thicknesses of 0.08 in. upwards, dia. of 0.5 in. upwards, and lengths of 8 ft. 10 ft. have been produced.

Although the experimental work was undertaken primarily for use in the nuclear energy industry, the tubing is expected to have far wider industrial applications.

In the U.S., the Beryllium Corporation, is producing hot pressed and machined beryllium oxide shapes designed for new applications in the nuclear, aircraft, missile and electronics industries. Another major application of beryllium oxide, produced in crucible form, is as a refractory material for the melting of such metals as uranium, thorium and beryllium itself. Beryllium crucibles are widely used in induction melting when extremely high purities are required or when the metal is highly reactive.

The Beryllium Corporation recently received a large research and development contract for an undisclosed sum from the Air Force. It is mainly concerned with a commercial method to produce ductile castings of beryllium. The U.S. Air Force is interested in lower cost methods to obtain this metal in fabricated forms.

CANADA'S NEW ASBESTOS PRODUCER

The 100,000-ton-per-year asbestos mining and milling operation of Lake Asbestos of Quebec, Ltd., a wholly-owned subsidiary of American Smelting and Refining Co., has been formally opened by the Premier of Quebec. This new producer will raise the output of asbestos in Canada by 10 per cent and in the Western World by 7 per cent. The mine, which was brought into production at a cost of \$36,000,000, involved emptying a 500-acre lake.

U.S. MAGNESIUM CONVENTION

The annual convention of the Magnesium Association, held in Detroit on October 15-16, was among the most outstanding conferences ever held by the industry. There was an attendance of more than 250. Detroit, though selected two years ago, was a particularly appropriate meeting place for this year's conference, since the U.S. domestic motor car industry is seriously considering the addition of small cars to its production lines.

Dr. C. J. Smithells, managing director of Magnesium Elektron Ltd., of London, reported, that in 1957, wrought products represented about 20 per cent of the magnesium used in structural applications—about 6 per cent of total magnesium consumption in the U.K. Some interesting new uses have been developed in this field, he added, but as in the U.S., the British industry is looking to the motor car industry for significant increases. With vehicles such as the Volkswagen using 42 lb. of magnesium,

designers are giving additional attention to the weight-saving advantages and the simplicity of pressure die casting. A great future for pressure die castings is anticipated, although present facilities will not produce castings larger than 30-40 lb.

TURKEY'S CHROME ORE OUTPUT DECLINES

According to figures published by the Turkish Statistical Office, chrome ore production by publicly owned mines in Turkey has declined considerably this year. Whereas in previous years the average monthly output ranged from 15,000 to 20,000 tonnes, the total mined during the first five months of 1958 amounted only to some 44,200 tonnes.

Output by private mines has also gone down, states the Turkish Chrome Ore Committee, the association of private mineowners. Business is almost at a standstill, the committee adds. At present, it is limited to the completion of old contracts, i.e. the barter agreement with the United States, concluded last year, under which 250,000 tonnes of ore will be shipped against wool from American government stocks.

According to figures published by the Chrome Ore Committee, output amounted last year to 941,000 tonnes

compared with 876,900 tonnes in 1956, last year's total comprising 629,000 tonnes in the private sector and 312,000 tonnes by the nationalized companies.

U.S. TUNGSTEN, COBALT IMPORTS

The U.S. Government has ordered a study by the Office of Civil and Defence Mobilization to determine whether imports of cobalt and tungsten are harmful to national security. The investigation is being made at the request of Howe Sound Co. New York, which has two mining subsidiaries. Calera Mining Co., one subsidiary, carried out cobalt mining operations at Cobalt, Idaho, and also operates a refinery producing electrolytically purified cobalt metal at Garfield, Utah. The tungsten petition was filed by the Tungsten Mining Corp., which is also a subsidiary of Howe Sound. Under Section 8 of the Trade Agreements Act, an industry can win tariff or quota protection if it convinces the Government that imports are damaging to national security.

This investigation is likely to bring protests from exporting countries should it result in a cutback in U.S. imports of cobalt and tungsten. However, it is to be hoped that, in view of the storm aroused by the imposition of lead-zinc quotas, other counsels will prevail.

COPPER • TIN • LEAD • ZINC

(From Our London Metal Exchange Correspondent)

During the last week, with the exception of the tin market, there has been a period of consolidation, and price levels themselves have showed a tendency to decline. This development was to be expected after the steep price rises during recent weeks and should be regarded as a healthy sign and an indication that after a pause markets may go to higher levels.

STRIKES CONTINUE

The copper market continues to be affected by the strike situation throughout the world, which shows little alteration from last week except that governmental pressure is now being exerted in Rhodesia. It is hoped that a settlement there will not be long delayed. The strike in Canada shows no signs of breaking. In the U.S. the strike at El Paso continues, but it appears that the one at the Chino mine is on the point of settlement. Consumers are becoming increasingly anxious about the effect of these strikes on the flow of metal from producers during the coming months, and there has, therefore, been more activity towards purchasing spot lots of metal from customs smelters, dealers, and other possible sources of supply. This action has been reflected in the quotations of the Metal Exchange by an increase in the backwardation.

In America there are stories of consumers being unable to obtain sufficient copper and producers insist that they have very little free metal available. To meet this situation, Kennecott have now gone back to a seven-day week, whilst the other two producers are increasing production, and it has been estimated that an additional 24,000 tons per month will soon be available to the market. In Chile the mines operated by the Ameri-

can companies are all working to capacity, but here again, there appears to be little metal free for sale.

The U.S. Copper Association's figures for September show that shipments of fabricated products from domestic brass and wire mills and foundries rose from 96,717 s.tons in August to 105,949 s.tons in September. New business booked also showed an improvement, and fabricators' stocks of refined copper at the end of September were some 5,000 tons below those of the end of August. On the Metal Exchange business has been active, and the undertone remains firm in spite of recession in actual prices. As mentioned above, the backwardation has increased and stocks in official warehouses fell by another 685 tons to a total of 8,234 tons at the beginning of this week. It appears that this drain is likely to continue for some weeks.

On Monday there were rumours in America that the British Government intended to announce the next day a further release of copper from its stockpile, but this has not materialized. Some quarters are still talking about the probability of a release to those U.K. consumers who are affected by the non-arrival of Rhodesian and Canadian copper, but even if this proves to be true, the tonnages involved are unlikely to be sufficient to have any lasting effect on the price level.

TIN GOES BETTER

The tin market has had an uneventful week except that there was a rumour that tin might feature as one of the items to be inserted in the U.S. Barter Bill. This was subsequently denied from Washington. An interesting point in the rumour was that it might apply only to

tin from Bolivian ores, and although this in itself would prove impracticable, it does give a hint that the American administration is giving some thought to the possibilities of helping Bolivian economy.

In Singapore the daily tonnages of tin sold on the market have steadied down but are still running at a rate to indicate that at the end of this quota period offerings will be very small indeed.

In America the U.S. Department of the Interior announced that tin consumption in August increased by 5 per cent over that of July, and with the present general situation it is expected that a further increase will be shown for September and also for this month. In the U.K. stocks in official warehouses rose slightly by the beginning of the week and the backwardation has showed signs of lessening. Some quarters feel that with the present development of the tin situation a contango should soon be re-established.

On Thursday morning the Eastern price was equivalent to £765 per ton c.i.f. Europe.

WILL BARTER EASE QUOTAS?

With the demand for immediate shipments of lead and zinc to America having subsided, prices have shown a tendency to weaken. It seems unlikely that there will be any major alteration in this trend until something more definite is known about the possibilities of barter in the United States. The probability of such action is considered good in a number of quarters, which draw attention to the large tonnages of both metals which are destined for the U.S. and which cannot be imported under the existing quota and is probably in excess of the next quarter's quota should it remain the same level as now. The presence of such metal in a bonded warehouse should help the case of those anxious to include lead and zinc under the barter programme.

Demand for the two metals throughout the world remains steady, and with the settlement of the various disputes in the motor industry in the U.S. there is every expectation that the consumption of zinc will show some improvement during the coming weeks. There has been no further news of the lines which various governments will adopt at the forthcoming conference in Geneva but the majority of people still consider that the only possible outcome of the meeting will be the formation of an international study group.

Closing prices are as follows:

	Oct. 23		Oct. 30	
	Buyers	Sellers	Buyers	Sellers
COPPER				
Cash	£240	£241	£245	£246½
Three months ..	£233½	£233½	£236½	£237
Settlement ..		£241		£246½
Week's turnover	14,300 tons		12,600 tons	
LEAD				
Current ½ month	£76	£76½	£73½	£74
Three months ..	£75½	£75½	£74	£74½
Week's turnover	9,600 tons		5,800 tons	
TIN				
Cash	£743	£744	£749	£750
Three months ..	£738½	£739	£746	£747
Settlement ..		£744		£750
Week's turnover	845 tons		670 tons	
ZINC				
Current ½ month	£72½	£72½	£73½	£74½
Three months ..	£71	£71½	£71½	£71½
Week's turnover	8,575 tons		7,325 tons	

London Metal and Ore Prices appear on page 483.

Mining Finance

The World's Most Highly Mechanized Stock Exchange

OFFICIAL share trading figures for all stock exchanges on the North American Continent during 1957 show the Toronto Stock Exchange standing first in volume for the sixth consecutive year and third in dollar value of transactions. Of the three leading exchanges, Toronto's volume for the year was 936,095,615 shares, against 914,162,544 for the New York Stock Exchange and 234,494,079 for the American Stock Exchange. In dollar values the New York Stock Exchange totalled \$27,546,761,807, the American Stock Exchange \$2,361,939,395 and the Toronto Stock Exchange \$1,864,830,780.

Of the trading on all Canadian stock exchanges, Toronto contributed 80 per cent to the aggregate total of 1,169,624,377 shares and 67 per cent of the dollar value.

Bearing in mind that, with a few notable exceptions, the head offices of leading Canadian mining and oil companies are situated in Toronto, it is scarcely surprising that the Toronto Stock Exchange—established in 1937—should be by far the largest market in the Dominion for mine and oil stocks, its last year's transactions in these categories aggregating 902,815,923 shares.

Of the 1,145 listed issues, more than half are in the dividend-paying category, and many of these have paid consecutive dividends for scores of years. Among leaders in the mining industry, International Nickel initiated payments in 1903 and, except for the 1932-33 year, has a continuous record of payments since then. Consolidated Mining and Smelting Co. of Canada started regular payments in 1924. Hollinger has paid dividends for 42 years, McIntyre Porcupine Mines for 41 years, Dome Mines for 38, Noranda for 28, and Wright-Hargreaves Mines for 27.

A notable feature of the Toronto Stock Exchange, believed to be unique,

By courtesy of the Board of Governors, the Deputy Editor of *The Mining Journal* was recently shown over the Toronto Stock Exchange, where bargains and prices are electronically recorded and analysed. Early in 1958 this Exchange, which is by far the largest market for Canadian mining shares, added to its power to regulate actions of listed companies.

is that besides being a meeting place for buyers and sellers, it is empowered under the Securities Act of 1933 to carry out primary financing.

Floor Procedure

As can be seen from the photograph, mines, oils, papers, utilities and the various other markets all have their own trading post on a particular section of the floor. On completion of a bargain a sales slip is made out in triplicate and the third copy goes to the recording department in the basement. The ticket is automatically time-stamped, the bargain is recorded, and the details are transmitted by ticker across the continent.

Twenty girls are continuously engaged in recording the day's highs and lows and the hourly cumulative totals of shares traded. Electronically-operated equipment has been installed which allows full records of the day's transactions of each of the 102 member firms to be set up very rapidly and stored for research purposes. In the event of an inquiry all purchases and sales of a particular stock over a given period can be analysed and tabulated within an hour or so.

Another notable application of electronics has made it possible for a broker in the office of any member firm to obtain instantaneously the latest price of any given share by dialling the code number of the stock.

The services which this very highly mechanized Exchange can provide for its members will be further extended by the still greater use of electronics in a new

Exchange which is to be erected in Toronto on a site for which no less than \$750,000 has been paid.

Among recent visitors to the Toronto Stock Exchange was the chairman of the building committee of the Johannesburg Stock Exchange, Mr. V. H. Simmons, who has been searching for new ideas, particularly on electronic equipment, for the new Johannesburg Exchange now being built in Hollard Street.

Regulations

Before the shares of any company are accepted for listing, certain requirements must be satisfied. In the case of a mining company these include a full and up-to-date report on the property or leases of the company and the development thereof made by a qualified independent mining engineer or geologist. The financial statement must show that sufficient funds are available to carry out the recommended development programme. The company must have a minimum of 100 shareholders, of whom a substantial number must be residents of Canada, and the entire authorized capital must be listed.

Every company whose shares are posted for trading must submit to the Exchange, as well as to its shareholders, an annual report containing a financial statement and must complete and file an annual questionnaire in the form prescribed by the Board of Governors. The Exchange has to be informed immediately of each proposed option, underwriting, sale or issue of shares. Companies whose principal business is mining, or the production of oil or natural gas, are also obliged to notify any proposal to mortgage any part of their properties or equipment.

This year the Toronto Stock Exchange has added to its power to regulate the actions of listed companies and requires them to make full disclosure of any material changes in their business or affairs. This must be done before the company takes any action which will result in material change, including underwritings or options which might involve using the facilities of the Exchange for primary distribution.

Material changes which must be reported by listed companies (except those which are specifically exempted such as the senior mining companies) include: A change in the nature of business; a change in the board of directors or the principal officer; a change in the beneficial or registered share ownership which is sufficient to affect control materially; the acquisition or disposition by the company of any mining property, or of shares or other securities in another company, at a price of more than \$25,000, payable otherwise than in shares of the company.

Part of the trading floor of the Toronto Stock Exchange, the busiest market on the North American continent for the number of shares traded.



It is axiomatic that no regulations can protect the public from itself. As long as gambling remains a human failing there will always be a ready market for the "penny shares" and as long as shares can be pushed by newspaper advertisements or high pressure telephone selling from so-called "boiler shops", the more gullible investors will always be easy prey.

In the more speculative fields of investment to know all is by no means always to forgive all. Ignorance, however, is the elixir on which misrepresentation thrives, from which it might be concluded that one of the most effective means of safeguarding investors is by the dissemination of accurate and up-to-date information.

In this respect the Toronto Stock Exchange sets an example which is wholly admirable. Its monthly review of listed stocks, which is available on subscription, shows the share capital, dividend records, highs and lows and number of shares traded in the previous month, and highs and lows for the past two years, as well as indices, quoted market values, and much other information.

The Exchange has a full-time public relations officer through whom exceptionally close relations appear to have been established with the Press, one result being the publication of daily prices and market summaries in an astonishingly large number of newspapers throughout the Dominion. Such is the co-operation extended to the Press that a journalist wishing to investigate the reason for heavy dealings in a particular stock is allowed to make enquiries on the floor itself.

One is left with the impression that nothing within reason has been left undone to protect investors and preserve the reputation of the Toronto Stock Exchange. The more rigorous control made possible by the latest regulations is clearly in the best interest of the Canadian mining industry and its shareholders. It should be particularly welcome to investors in Britain and other countries situated at a considerable distance from Canada who are not always in a position to keep themselves fully up-to-date on developments affecting their interests because of the difficulty and time-lag in obtaining the required information.

MOUNT ISA — A BONUS AGAIN

As last year, Mount Isa, the big Australian lead, zinc and copper producer, is paying a lower final dividend than interim. But, also as last year, there is a further free share issue, this time one fully-paid 5s. share for every eight held against one for ten on the last occasion. The final dividend is to be 3d., making 7½d. per 5s. stock unit for the year to June 30 last against 9d. for 1956-57. These amounts, along with the following profit figures, are all in Australian currency. A U.K. holder gets a fifth less subject to U.K. tax as reduced by double tax relief.

Mount Isa has been pursuing a very conservative dividend policy during the boom years for the metal prices. This explains the small cut in the distribution on this occasion despite a 51 per cent drop in gross profits to £3,025,240. Tax takes £250,000 against £800,000. The appropriations in recent years have been on a generous scale so that the present reductions therein should certainly not strain the company's financial resources. Provision for income tax equalization is

reduced from £1,100,000 to £350,000 and depreciation from £1,207,917 to £1,001,111. The allocation for capital expenditure and development is only £400,000 against £1,800,000.

There seems to have been no question of any production cutbacks at Mount Isa's Queensland property. Output reached record levels in the year to June 30 and still appears to be forging ahead in the early part of the current financial period. It is, in fact, the continued growth prospects that presumably ties the stock units to what has become a permanently low yield basis. The present return to a U.K. holder is not a great deal over 2 per cent after allowing for the exchange loss on the dividend. The year 1959 is scheduled to see still further material production increases plus the commissioning of the new electrolytic copper refinery at Townsville. Mount Isa is American controlled, the American Smelting and Refining Co. holding 52.7 per cent of the equity.

COPPER DIVIDEND CUTS CUSHIONED

The October profit and final dividend season for the Northern Rhodesian copper companies has been brought to a close with the announcements from Rhokana and Rhodesian Anglo American. These figures are of especial interest because this group, unlike Rhodesian Selection Trust, does not issue quarterly reports. Rhokana's actual mining experience has been much in line with that of the latter group in that its operating profit for the year to June 30 last at £3,238,321 is down by 63 per cent compared with Roan's 73 per cent and Mufulira's 64 per cent. Rhokana also has considerable investment income from

its holdings in Nchanga and Mufulira. This has fallen on this occasion by £1,905,357 to £2,121,154 making the net surplus after tax £4,282,853 against £10,104,285 in 1956-57.

As with the R.S.T. group, the effect on dividends is being cushioned by cutting allocations. General reserve gets nothing compared with £647,733 a year ago, while the appropriation for capital expenditure is reduced from £3,500,000 to £1,398,101. The final dividend is 20s. after deducting Rhodesian tax, making 25s. for 1957-58 against 45s. for 1956-57. The distribution absorbs £3,125,002. It puts Rhokana at £29 ex dividend on the modest yield basis of 4.3 per cent before allowing for double tax relief. As with other copper shares in this section buyers of Rhokana have been looking forward to better things now that the metal price has risen to £245 a ton compared with an average of around £180 in the year to June. They have been paying little attention to the seven-week break in production caused by the European labour strike or to the fact that this in itself has played quite a part in boosting copper values.

Rhodesian Anglo American controls Rhokana in which it has a 52 per cent interest. It also holds a 21 per cent direct stake in Nchanga. Its net profit for the year to June is down from £5,155,235 to £2,837,641, a drop of 45 per cent, but the dividend is reduced proportionately rather less than this, the final of 3s. net of Rhodesian tax making 4s. against 6s. 6d. Rhokana also gives group profit figures which include the whole of the profits for Rhokana and Nchanga. The net surplus on this basis comes out at £8,103,777 compared with £18,319,080 in 1956-57. Rhokana at 78s. ex dividend offer a yield of 5.1 per cent before double tax relief or rather more than that on

LONDON METAL AND ORE PRICES, OCT. 30, 1958

METAL PRICES

Aluminium, 99.5%, £180 per ton	Iridium, £20/£22 oz. nom.
Antimony—	Lanthanum (98/99%) 15s. per gram.
English (99%) delivered, 10 cwt. and over £190 per ton	Manganese Metal (96% - 98%) £290
Crude (70%) £190 per ton	Magnesium, 2s. 54d. lb.
Ore (60%) bases 19s. 6d./20s. 6d. nom. per unit, c.i.f.	Nickel, 99.5% (home trade) £600 per ton
Arsenic, £400 per ton	Osmium, £17/£18 oz. nom.
Bismuth (min. 1 ton lots) 16s. lb. nom.	Osmiridium, nom.
Cadmium 9s. 6d. lb.	Palladium, £5/£5 15s.
Cerium (99%) net, £16 0s. lb. delivered U.K.	Platinum U.K. and Empire Refined £21 5s. oz.
Chromium, Cr. 99% 6s. 11d. lb.	Imported £18 15s./£19 15s.
Cobalt, 16s. lb.	Quicksilver, £78 0s. ex-warehouse
Germanium, 99.99% Ge. kilo lots 2s. 5d. per gram.	Rhodium, £40/£42 oz.
Gold, 250s. 14d.	Ruthenium, £14/£16 oz. nom.
	Selenium, 50s. 0d. per lb.
	Silver, 77½d. f. oz. spot and 78d. f.d.
	Tellurium, 15s./16s. lb.

ORES AND OXIDES

Bismuth	30% 5s. 0d. lb. c.i.f.	20% 3s. 3d. lb. c.i.f.
Chrome Ore—		
Rhodesian Metallurgical (semifine) 48%	(Ratio 3:1)	£15 15s. 0d. per ton c.i.f.
" Hard Lumpy 45%	(Ratio 3:1)	£15 10s. 0d. per ton c.i.f.
" Refractory 40%		£11 0s. 0d. per ton c.i.f.
" Smalls 44%	(Ratio 3:1)	£14 0s. 0d. per ton c.i.f.
Baluchistan 48%	(Ratio 3:1)	£11 15s. 0d. per ton f.o.b. nom.
Columbite, 65% combined oxides, high grade		
Fluorapatite—		
Acid Grade, Flotated Material		£22 13s. 3d. per ton ex. works
Metallurgical (75/80% CaF ₂)		156s. 0d. ex works
Lithium Ore—		
Petalite min. 31% Li ₂ O		40s. 0d./45s. 0d. per unit f.o.b. Beira
Lepidolite min. 33% Li ₂ O		40s. 0d./45s. 0d. per unit f.o.b. Beira
Amblygonite basis 7% Li ₂ O		£25 0s. per ton f.o.b. Beira
Magnetite, ground calcined		£28 0s./£30 0s. d/d
Magnetite Raw (ground)		£21 0s./£23 0s. d/d
Manganese Ore Indian—		
Europe (46% - 48%) basis 55s. 0d. freight		£34/£35d. per unit c.i.f. nom.
Manganese Ore (43% - 45%)		70d./75d. per unit c.i.f. nom.
Manganese Ore (38% - 40%)		50d./54d. per unit c.i.f. nom.
Molybdenite (85%) basis		8s. 5d. per lb. (f.o.b.)
Titanium Ore—		
Rutile 95/97% TiO ₂ (prompt delivery)		£35/£36 per ton c.i.f. Aust'n
Ilmenite 52/54% TiO ₂		£11 10s. per ton c.i.f. Malaysia
Wolfram and Scheelite (65%)		60s. 6d./72s. 6d. per unit c.i.f.
Vanadium—		
Fused oxide 95% V ₂ O ₅		8s./8s. 11d. per lb. V ₂ O ₅ c.i.f.
Zircon Sand (Australian) (65 - 66% ZrO ₂)		£14 0s. per ton c.i.f.

Rhokana. The market is obviously here thinking in terms of the latter's dividend recovery possibility being greater than those of its parent.

The next big event in the Rhodesian copper share market will be the annual reports and chairmen's statements for the R.S.T. group in a fortnight's time when, if the usual practice is followed, there will also be this group's first quarterlies for the current financial year.

LESS FROM KAMUNTING

Kamunting Tin, the multi-dredge producer, was only just beginning to feel the effects of production restriction (which began on December 15, 1957) in its year to March 31 last. According to the monthly returns its output of tin concentrates in that period added up to 1,660 tons against 2,356 tons in 1956-57 and 1,845 tons in 1955-56. The year 1956-57 was a bumper one because it marked the first period of full production for the two Bangtoe dredges in Siam. It also heralded the first impact of the Overseas Trade Corporation tax concessions. A net profit after tax was thus made of £402,200 out of a gross surplus of £525,700.

In 1957-58 this latter surplus has dropped to £246,245, but with the tax charge now having returned to normal in the new circumstances, the net figure is down by proportionately more at £129,245. The dividend is brought up to 27½ per cent with a final of 20 per cent on the 5s. shares. This absorbs £105,746 net against £180,730 for the preceding year's 47 per cent. That the payment has not been cut to a greater extent is due to only £34,879 being put to the reserve for transfer of dredges against £220,000 a year previously, while the carry-forward is lowered by £11,380 to £74,983. This should not have significantly weakened Kamunting's strong balance sheet position.

In the first six months of 1958-59 the company's sales allowed from its Malayan and Siamese properties under the International Tin Agreement have totalled 536 tons and there will be a further setback under the reduced quota for the current quarter. Against this the opportunity is seemingly being taken to build up a permitted stockpile because Kamunting's production for the past six months has aggregated 682 tons. At the moment, however, it looks as though shareholders will have to face up to still lower earnings in the present financial period. At 10s. cum dividend the shares are already discounting this, anyway to some extent, the yield on the past year's distribution being over 14 per cent.

LONDON AND AFRICAN

London and African Mining Trust has a wide spread of investments, the chief percentages of those quoted being oil producers 37 per cent, tin and columbite companies 28 per cent and commercial and industrial concerns 21 per cent. They had a book value on September 30 of £181,634 and a market value at that date of £175,268. They brought in a net profit in the past year of £15,890 against £84,968 in 1956-57 when there was a special profit on the sale of the Premier Consolidated Oilfields holding. Last year there was no such windfall and there were inevitably reduced payments from the Nigerian tin and columbite producers. The dividend on the 2s. shares

(Continued on page 486)

LONDON MARKET HIGHLIGHTS

Solid, if not particularly spectacular, progress was made by the Kafir market during the past week. *The Financial Times Gold Share Index* edged up to its highest since April, 1956. A widespread variety of firm spots contributed to the movement. Particularly interesting was the battle of the giants when Free State Geduld (110s. 7½d.) succeeded in at last overtaking Western Holdings (110s.).

Consolidated Gold Fields (61s. 9d.) ran into some profit-taking after their advance on the unexpectedly higher dividend and share-splitting proposals but gave up comparatively little of the rise. President Brand (63s. 9d.) staged a fresh move upwards and buyers were also about for "Ofsits" (78s.) and several of the older producers.

The only weak spot to mar the overall picture was the persistent selling of Hartebeest. This emanated from the Cape and was said to be based on talk there of lower development values, but after tumbling to 63s. the shares rallied on a change of heart to 64s.

Around mid-week a great deal of interest was aroused by the news that a small amount of uranium had been sold by South Africa to Japan. Only 6½ tons of uranium oxide were believed to be involved, but this was seen as a significant early step in the development of a free market in the metal. Thus, hopes of sales above the normal quotas led buyers to Randfontein (25s. 6d.) and Western Reefs (29s. 4½d.) among several other uranium producers.

Among other South African issues, a revival in coal shares followed growing expectations of a rise in the commodity

price. Tweefontein United Collieries jumped to 54s. 3d. and Transvaal and Delagoa Bay were ½ up at £9. Diamonds moved up on hopes that current quarter's sales figures will more than maintain their recent recovery. De Beers led the way, rising to nearly their best this year of 115s.

Trading conditions in copper shares were difficult, to say the least. Wall Street was behaving uncertainly, so was the metal price and nobody cared to take a view on the duration or outcome of the Copperbelt strike.

During a trying period share prices fluctuated wildly from day to day, and finished more or less back at where they started. Even the very reasonable final dividends from Rhokana and Rhokanglo had little effect in the prevailing confusion. A better response was, however, prompted by the Messina payment of 8s.

Among tin shares, potential buyers were more concerned with the effects of Tin Agreement production limitations on company earnings than the strengthening metal price. The market was steady enough, however, and Beralit cautiously improved to 29s. on the modest recovery in wolfram.

The reaction in Lead-zincs that had set in following news of lay-offs in the work force at Broken Hill South, resulted in a general weakening of prices. Broken Hill South dropped to 43s. 6d. (they had touched 49s. 9d. in the previous week), but after easing to 55s. 3d., Consolidated Zinc recovered to 56s. Mount Isa (25s. 7½d.) were helped by the better-than-expected dividend and profits returned.

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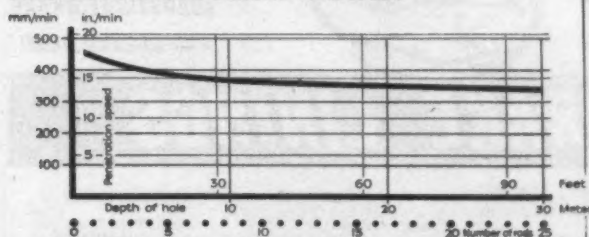
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MINING FINANCE—Continued

is maintained at 10 per cent on the capital as increased by the three for ten capitalization issue, but last year's 10 per cent bonus is omitted. The dividend absorbs £14,016, leaving the carry-forward slightly higher at £25,616. There is no transfer to capital reserve this time against £56,252 last year.

Mr. W. J. C. Richards, the chairman, devotes most of his statement to the company's major unquoted investment, Mines Development Syndicate, in which over 50 per cent of London and African's capital is involved. He holds out some hope that as soon as metal surpluses decline and prices rise the money will be forthcoming for this Nigerian lead-zinc property. Some large mining groups and others are stated to be "genuinely interested". London and African, Mr. Richards says, intends to preserve its holding in this mine which, he avers, could produce attractive profits even at today's metal values owing to its low cost of production. American Smelting and Refining was at one time highly interested in the proposition, but decided to pull out some five or six years ago.

London and African are 1s. 7½d. ex dividend to yield 12.3 per cent on the 1957-58 payment. They could have a speculative revival one of these days if anything did develop in connection with the lead-zinc venture.

HARMONY MARCHES ON

Harmony Gold, the Central Mining group O.F.S. gold and uranium producer, is to be congratulated on the new and

highly informative form of its annual report for the year to June 30 last. Of chief interest is the new light thrown on the company's financial situation. Capital expenditure for the current financial year is estimated at approximately £3,000,000 which if all taken from profits would require 3s. 4d. a share or more than the recent earnings rate. Part of it, however, is being financed from the £2,000,000 loan from Central Mining Finance of which £1,500,000 had been drawn by June 30. Since then the final instalment of £500,000 has been borrowed. The rest, it is officially stated, together with the further amounts that will have to be spent in 1959-60 to complete the big expansion programme, should be capable of being financed from available cash and future profits while still being able at least to maintain the present dividend rate of 2s.

The point is, of course, that Harmony should now be running into an era of sharply expanding profits. The new No. 2 shaft is on the threshold of bringing up reef from the central part of the property which has been given above-average values from development. This event could thus boost gold recovery per ton as well as sending monthly crushings further on their way towards the 150,000 tons plant capacity from last month's record to date of 100,000 tons. And now the plant is to be enlarged still further to 200,000 tons by the beginning of 1960. The uranium capacity is nearing 120,000 tons, which must be regarded as the limit for the time being. The pyrite plant is being expanded by 50 per cent to 120,000 tons and a sulphuric acid plant is being erected.

While the money is being spent on all

this, Harmony will be shielded from tax liability. The amount of capital expenditure that can be offset against profits before tax becomes payable was already £11,670,000 at June 30. This means that it may be three to four years before tax will really begin to eat into earnings. Harmony's capital is £4,500,000 in 5s. shares which stand at 38s. 9d. The yield on a 2s. dividend is 5.2 per cent. Some further increase in the payment is thus already being discounted. Nevertheless, there could well be a lively market response to the rising profits that look likely over the next few months.

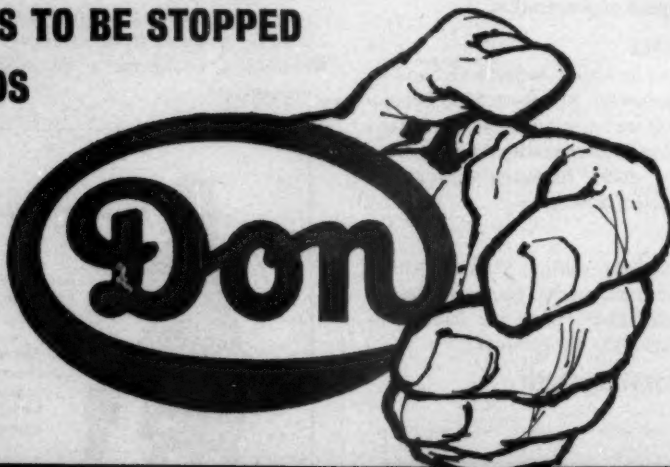
The Zinc Development Association has issued a review of its services in 1957. Important progress is recorded in many fields. Membership continued to grow and fresh impetus was given to co-operation between zinc producers and users both at home and abroad. At meetings in London arranged by the Z.D.A. and attended by all the leading European zinc producers, there was full agreement on the need for much wider international collaboration. The growing interest in the development of zinc in Europe has also led to the formation of two new zinc associations—the Centre Belgo-Hollandais d'Etudes et de Recherches pour le Développement des Usages du Zinc—supported by producers in Belgium, the Netherlands, and the Belgian Congo; and the Istituto Italiano del Piombo e dello Zinco, set up with the support of the Italian industry. The American zinc-producing industry has quickly responded to the association's new programmes of development work, especially those for Europe, and six American companies are now members.

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The annual general meeting of Kwahu Mining Co. (1925), Ltd., was held on October 23 in London.

Mr. A. Hedley Williams, M.I.M.M., M.Inst.Pet., Chairman, presided. The following is an extract from his circulated Statement:—

The accounts for the year to June 30, 1958, show a net profit after all charges of £17,625, which compares with £20,381 for the previous year. Investment income has increased as a result of the re-entry into the dividend list of Ghana Main Reef Ltd., with a payment of 5%. The revenue from share dealings was lower, reflecting the more difficult conditions which obtained following the raising of the Bank Rate to 7% in September, 1957, and the Government policy of credit restrictions which ensued over the following months.

The Balance Sheet as presented gives effect to the special resolution passed at the extraordinary general meeting held on May 16, 1958, whereby the Share Premium Account has been extinguished by writing off against it depreciation on certain of our investments. This has permitted the resumption of dividends and a payment for the year of 15% is recommended.

With the gradual relaxation of credit restrictions, share market valuations have appreciated and as a result our investment portfolio at the present time, has a value of £224,329 against a book cost of £162,206.

Ghana Main Reef Ltd. has achieved a more stable position as regards its operating results and the enlightened attitude adopted by the Ghana Government to the gold mining industry will, it is hoped, render it practicable for that company, at the due time, to repeat the dividend of 5% paid earlier this year. Development results on the Ekotokroo and Tuappim sections are being maintained. In the central Bondaye Section the values exposed on the 20th level showed an improvement over the 19th level and the main shaft is being sunk to the 22nd level to test the downward extension of these values.

The report and accounts were adopted, and the proposed dividend of 15 per cent. for the year was approved.

Publications Received

The Purchasing Officers Association has issued *The Organisation of Purchasing in Industry*, a report of the Purchasing Sub-Committee of the Association. Price 1s.

★
The Cambrian Geology of Australia, by A. A. Opik and others, is published as *Bulletin No. 49* by the Commonwealth of Australia, Department of National Development. The papers were first presented at the 20th International Geological Congress, Mexico, 1956.

★
The physiography, general structural, and economic geology of an area of about 4,500 sq. miles is dealt with in *Bulletin 110, the Geology of the Phillips River Goldfield, Western Australia*. The Bulletin is published by the Geological Survey of Western Australia, and is written by John Sofoulis, B.Sc. An accompanying volume to the report contains sixteen maps, plans, and sections.

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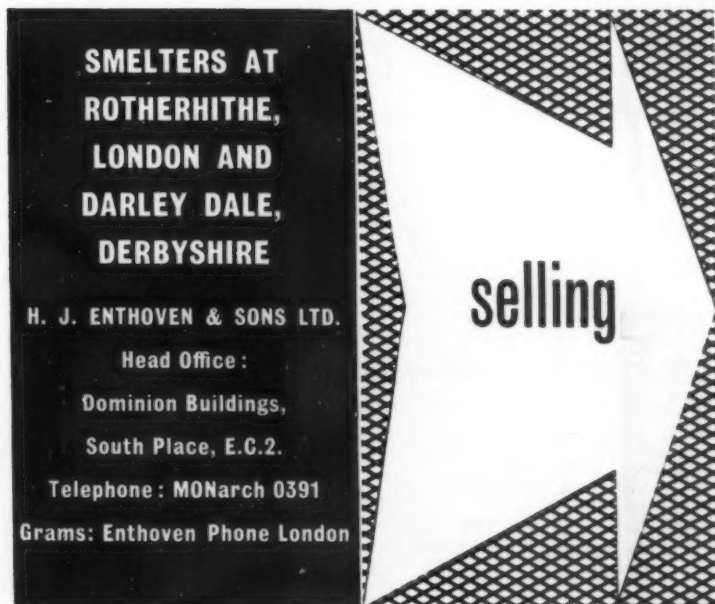
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The Mining Journal

ANALYSIS OF RAND AND O.F.S. QUARTERLIES

WATCH THOSE YIELDS !

SINCE the August issue of this *Supplement* the Kaffir market has, broadly speaking, continued on the upward trend displayed by the older mines since mid-year and by the new mines and the finance houses over the past six months. Even so the older mines are still generally at prices near those ruling when the *F.T. Gold Share Index* was at its spring peak of 77.8 in the third week of May. With the index now at around 84, this emphasizes the extent to which the new mines and the finance houses have continued to provide the bright spots.

Boom in the Newer Mines—

The recent strength in the market for the newer mines came initially on demand from Johannesburg, due in part, no doubt, to the expectation of encouraging September quarterly reports, but probably in part also to American buying stimulated by the success of the American South African Investment Company flotation and to Continental interest following Anglo American's successful £4,250,000 bearer bond issue in Germany. Both are discussed below. More recently there has also been a growing volume of solid buying on the London market, and the immediate indications as we write (at the end of October) are that the market may go better yet.

With no obvious signs that investors are getting out of industrial equities either on Wall Street or in London (despite the average 25 per cent increase in American and 30 per cent increase in British industrial ordinary share values since their respective low points of this year) it must be assumed that more of the new money, which is always coming forward for investment, is finding its way into Kaffirs.

Certainly, the recent rise in prices has more than discounted anything which has emerged from the September quarterly reports. It has, moreover, taken place in the face of the present sharp recovery in the American economy and a more than usually specific rejection by Washington of the perennial South African plea for a higher gold price, which together could normally be relied on to depress the gold share market. All this confirms the impression that prices are rising on buying pressure rather than on any market re-assessment.

This is welcome news provided that the trend is not allowed to get out of hand. Certainly, no one with recollections of the aftermath of earlier Kaffir booms would want to see the market starved for stock in the face of buying which threatened to force down prospective yields below a healthy level. Just what is a reasonable yield requirement on a

new Kaffir mine in this day and age is something about which the market may therefore have to take a view quite soon, if dealings are to remain realistic.

This is not intended to imply that the market is as yet generally over-valued but we would certainly feel uneasy about any of the newer mines at prices showing a yield of less than 8 per cent on an eventual earnings basis. If the rise in gold shares can keep pace with industrial without any gold price increase in prospect (as has been the case in the past few months), it is not difficult to visualize the buying pressure on Kaffirs, which could develop in this habitually tight market in the event of any flight

do anything substantial towards prolonging the life of the marginal mines become fainter as we continue to await—no longer with much interest—the publication of the report of the joint committee of enquiry into these mines. Secondly, the prospect of any immediate (as distinct from the inevitable eventual) increase in the price of gold has been fainter prior to this year's I.M.F. meeting than for some years past and this has been the first September for quite a while in which there has apparently been no buying of old mines on gold price hopes.

Certainly, it would be difficult to find other inducements to buy, except perhaps among a few of the "short" life or "break-up" mines. Apart from the fact that in a number of the old mines the average mill grade is gradually declining, mining costs are still generally on the increase, although admittedly at a slower rate than in recent years. (In the newer mines, this influence may be masked by higher milling rates, but it is, nevertheless, there.)

Costs in an Overfull Economy

The question of how long the return to a steeper inflationary trend in the Union's economy can be resisted is thus a matter of crucial importance—alike for the marginal mines and for the government, which has the problem of bringing alternative employment to those areas of the central and eastern Rand which are threatened with mine closures over the next few years.

Although unemployment figures in the Union are still insignificant, the economy's rate of growth had been slowing down earlier this year and there had been anxiety in some sections of industry regarding the reduction in forward orders. However, even the building industry, which was particularly affected, is picking up again and a more confident tone has developed in the past two months. Moreover, now that South Africa's gold reserve position is looking healthier again, Dr. Verwoerd's new government is expected to end the credit squeeze.

Dr. Verwoerd is said to attach particular importance to the development of South African industry, and it remains to be seen how quickly the economy begins to feel the stimulus of this policy as exemplified in the appointment of Dr. Diederichs as Minister for Economic Affairs—undistracted by the cares of the Mines Department—a portfolio which is now placed, with that of Labour, under the care of Senator de Klerk, who clearly has the full support of his Prime Minister in his policy of job reservation.

(Continued on page 9)

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from American common shares (now yielding on average no more than long-dated government bonds), or any renewed lack of confidence in the dollar. The safety valve in such a situation would, of course, be in the hands of the groups, and it would be surprising if they did not come in as sellers in cases where they felt that prices were becoming unrealistic.

—Brings Little Cheer to the Rest

Meanwhile, until the full potentiality of the newer mines is proved over the next few years, there is likely to be a widening gap between market values of the older mines and the remainder of the Kaffir market. This can be said with greater confidence now that two developments, which could have been particularly beneficial to the older mines appear less likely to materialize.

In the first place the indications that the South African Government intend to

FINANCIAL RESULTS

(Cumulative and comparative "this" financial year to September 30th, 1958 with "last.")

GROUP	COMPANY	ORDINARY SHARES IN ISSUE	Months since year end	PROFIT AND LOSS RESULTS £(000)								Current financial year's capital expenditure (Gold) £(000)	Earnings in current year to date	EARNINGS, DIVIDENDS & YIELD										
				Working Profit		Uranium Profit After Loan Repayment		Taxation and/or Mining Lease		Net Profit After Tax				Paid				Yield on Price 24/10/58						
														1957		1958								
				This	Last	This	Last	This	Last	This	Last			s. d.	s. d.	s. d.	s. d.		(0/0)					
Gold Fields	Doornfontein	9,828,000 (10/-)	3	581.1	545.9	35.1	45.1	—	—	627.2	600.4	178.2	1/3	—	6	1	0	1	0	7.4				
	Libanon	7,937,300 (10/-)	3	164.1	160.6	—	—	—	—	171.5	167.7	85.5	5d.	3½	3½	3½	3½	3½	6.8					
	Lupatards Vlei	4,969,105 (2/-)	3	15.7	16.9	179.5	181.5	91.3	76.0	108.4	103.1	6.3	4d.	10½	1	0	1	1	1	19.6				
	Rietfontein C.	1,122,252 (4/-)	9	113.3	145.6	—	—	30.6	63.1	66.0	86.0	—	1/2	1	1	1	1	1	0	—				
	Robinson	2,000,000 (6/-)	9	28.4	86.8	—	—	—	—	49.6	125.9	8.9	5d.	6	6	9	1	6	—	—				
	Simmer	6,750,000 (2/-)	9	127.2	168.9	—	—	11.1	18.0	138.8	189.7	12.1	5d.	5	5	5	5	6	—	—				
	Sub Nigel	1,771,875 (10/-)	3	78.0	84.2	—	—	28.5	33.3	54.8	64.6	9.0	7d.	2	4½	1	9	1	6	21.4				
	Venterspost	4,900,000 (10/-)	3	181.8	181.9	—	—	60.0	50.2	130.4	140.4	34.6	6d.	10½	10½	10½	10½	11.1	—	—				
	Vlakfontein	6,000,000 (10/-)	9	763.0	768.8	—	—	362.1	355.1	411.6	424.6	15.0	1/4	10	10	11	11	11	11.1	—				
	Vogels	5,028,571 (10/-)	9	394.8	486.2	264.0	261.0	328.6	297.1	344.1	455.4	3.5	1/4	1	6	1	4	1	2	0	23.7			
W. Drie	7,041,080 (10/-)	3	1876.3	1782.3	62.4	52.4	786.5	692.5	1176.9	1162.8	370.4	3/4	3	0	3	3	3	6	3	9	6.6			
Anglo American	Brakpan	4,600,000 (5/-)	9	119.5	123.1	—	—	12.8	14.8	117.3	121.8	0.2	6d.	6	4½	4½	4½	4½	13.3	—	—			
	Dagga	7,000,000 (5/-)	9	2303.9	2484.8	839.6	833.6	1970.8	2009.2	1202.9	1354.1	12.9	3/5	2	9	2	6	2	9	17.5	—			
	E. Dagga	3,730,000 (10/-)	9	259.1	323.0	—	—	102.0	135.6	166.7	198.4	2.0	11d.	9	9	9	9	7½	16.2	—				
	F.S. Geduld	10,000,000 (5/-)	12	4050.4	2259.0	—	—	—	—	4079.9	2277.1	755.9	8/2	—	—	1	0	2	0	4.6	—			
	Lorraine	16,433,372 (10/-)	12	1237.7	165.8	248.8	173.1	—	—	18.6	114.6	308.4	—	—	—	—	—	—	—	—	—			
	P. Brand	14,040,000 (5/-)	12	6043.3	4805.7	330.9	287.8	335.0	—	6063.3	5126.1	1714.7	8/8	2	0	2	6	2	6	2	6	8.0		
	P. Steyn	14,040,000 (5/-)	12	2386.9	2412.6	421.2	433.1	—	—	2830.9	2870.1	298.8	4/-	1	0	1	3	1	6	1	3	8.3		
	S. A. Lands	2,475,000 (3/6)	9	487.4	585.6	—	—	119.8	241.8	379.4	356.2	183.9	3/1	1	6	1	6	1	6	1	6	11.4		
	Springs	10,110,000 (5/-)	9	86.9	67.9	—	—	18.2	13.4	77.6	65.0	—	2d.	3	—	—	4½	—	—	—	—	—		
	Vaal Reefs	10,000,000 (5/-)	9	1672.2	1451.6	976.4	776.5	—	—	2668.3	2244.3	909.6	5/4	1	0	1	3	2	3	1	6	9.7		
Central Mining	Welkom	12,250,000 (5/-)	12	881.2	684.3	378.0	155.1	—	—	1275.6	859.2	948.4	2/1	—	—	—	3	3	2.1	—	—	—		
	W. Holdings	7,496,376 (5/-)	12	4707.6	3728.3	—	—	—	—	4740.4	3757.5	1461.8	12/8	2	0	2	0	3	0	3	0	6.5		
	W. Reefs	7,000,000 (5/-)	9	590.6	615.5	864.4	856.4	793.3	712.4	678.3	777.8	139.8	1/11	1	3	1	3	1	3	1	3	8.5		
	Blyvoor	24,000,000 (2/6)	3	1451.5	1368.2	325.2	283.0	1061.1	944.9	771.8	748.3	66.4	8d.	1	0	1	0	1	0	1	0	8.3		
	City Deep	2,026,832 (£1)	9	90.6	148.7	—	—	4.2	—	145.0	233.1	47.2	1/5	6	6	6	6	6	6	6.6	—	—		
	Cons. M.R.	1,247,602 (£1)	3	40.7	29.4	—	—	2.3	1.9	52.0	40.4	—	10d.	1	6	1	3	1	3	1	3	14.7	—	
	Crown	1,886,125 (10/-)	9	139.4	2.9	—	—	16.7	17.5	221.9	139.0	8.3	2/4	2	0	1	0	1	3	1	6	10.2	—	
	Durban Deep	2,325,000 (10/-)	9	458.6	462.1	—	—	91.0	105.7	432.5	431.8	132.5	3/9	1	6	1	6	1	6	1	6	9.8	—	
	E. Rand Prop.	3,960,000 (10/-)	9	1317.8	1380.2	—	—	345.8	379.7	1073.4	1123.6	387.7	5/5	2	6	2	3	2	3	2	0	10.9	—	
	Harmony	18,000,000 (5/-)	3	419.8	546.7	269.4	235.7	—	—	680.3	795.5	547.4	9d.	6	9	1	0	1	0	1	0	9.2	—	
J.C.I.	Modder E.	930,805 (£1)	3	5.6	11.1	—	—	2.0	3.1	10.6	16.0	—	3d.	1	0	1	0	9	9	10.3	—	—		
	Rose Deep	700,000 (9/6)	9	17.5	3.7	—	—	8.4	2.5	28.1	33.8	Cr.22.5	10d.	—	—	—	—	—	—	—	—	—	—	
	Transvaal G.M.E.	952,500 (3d.)	9	23.6	24.1	—	—	—	—	13.6	17.1	Cr.12.7	3d.	10	—	—	—	—	—	—	—	—	—	
	E. Champ d'Or	2,079,000 (2/6)	9	54.5	53.5	(a)	(a)	18.6	15.6	36.1	38.3	—	4d.	7	3	4	3	29.2	—	—	—	—	—	
	Freddies C.	16,359,913 (£1)	9	1100.1	96.7	(a)	(a)	—	—	1136.3	58.9	49.0	—	—	—	—	—	—	—	—	—	—	—	
	Govt. G.M.A.	5,600,000 (4/6)	9	10.1	157.1	—	—	46.2	21.3	191.4	162.8	—	8d.	3	—	—	—	—	—	—	—	—	—	
	Randfontein	4,063,553 (£1)	9	1037.1	979.0	(a)	(a)	389.0	263.0	657.9	730.8	17.1	3/3	2	6	2	3	2	3	2	0	17.5	—	
	Union Corporation	E. Geduld	9,000,000 (4/-)	9	2417.2	2681.4	—	—	1303.9	1441.0	1209.7	1337.1	1.2	2/8	2	3	2	0	2	0	1	9	15.1	—
		Geduld Prop.	1,460,857 (£1)	9	94.3	223.2	—	—	9.4	59.3	429.8	547.8	—	5/11	7	6	6	3	6	6	5	0	18.0	—
		Grootvlei	11,438,816 (5/-)	9	1918.5	1984.1	—	—	998.0	1021.2	985.6	1022.5	—	1/9	1	4	1	1	1	3	1	1	14.1	—
Marievale		4,500,000 (10/-)	9	751.6	755.2	—	—	355.7	366.8	421.4	412.9	268.2	1/10	1	3	1	0	1	3	1	0	10.8	—	
St. Helena		9,625,000 (10/-)	9	1678.3	1680.4	—	—	—	—	1719.5	1725.1	932.0	3/7	9	10	1	0	1	1	1	4.7	—	—	
Van Dyk		5,532,000 (9/-)	9	232.5	92.0	—	—	—	—	252.1	113.6	—	9d.	—	—	—	—	—	—	—	—	—	—	
General Mining	Buffelsfontein	11,000,000 (10/-)	3	552.0	530.1	370.1	249.7	—	—	933.6	788.5	286.2	1/8	—	—	1	6	1	6	6.7	—	—	—	
	Ellaton	787,500 (5/-)	3	98.1	78.2	40.0	35.4	—	—	140.5	116.0	Cr. 0.5	3/7	—	—	—	—	—	—	—	—	—	—	
	Stilfontein	13,062,920 (5/-)	9	3483.2	2620.3	451.5	386.4	—	—	3967.6	3034.6	2395.5	6/1	6	10	1	10½	1	10½	8.4	—	—	—	
	S. Roodepoort	1,420,662 (10/-)	3	70.6	73.1	—	—	30.7	36.0	46.9	42.1	1.6	8d.	1	½	1	½	1	½	1	½	—	—	—
	W. Rand Cons.	4,250,000 (10/-)	9	1927.6	1920.0	(a)	(a)	909.0	825.0	1016.0	1004.7	17.7	3/7(c)	2	3	2	0	2	3	2	0	17.0	—	
Anglo-Trial	Hartbeesfontein	9,000,000 (10/-)	3	931.7	971.9	714.7	587.2	—	—	1651.3	1556.0	610.2	3/8	1	6	2	6	3	0	3	6	9.9	—	
	Rand Leases	3,600,000 (10/-)	3	23.0	33.7	—	—	1.6	0.9	35.7	46.8	6.9	2d.	1½	1½	3	1½	3	1½	7.9	—	—	—	
	Village Main Reef	6,068,457 (1/3)	3	1.2	20.8	—	—	—	5.0	1.0	18.2	—	—	—	1	1	1	1	1	—	—	—	—	
	Virginia	13,278,952 (5/-)	9	337.2	592.3	932.8	1224.2	—	—	1118.3	1681.2	932.0	1/8	—	—	—	—	—	—	—	—	—	—	—
Others	N. Kleinfontein	1,735,000 (£1)	9	127.8	144.4	—	—	—	—	120.7	136.0	—	—	—	—	—	—	—	—	—	—	—	—	—
	Spaarwater	7,974,968 (5/-)	9	5.8	3.4	—	—	—	—	7.9	5.3	—	—	—	—	—	—	—	—	—	—	—	—	—
	Wit Nigel	7,974,720 (2/6)	3	18.5	21.3	—	—	—	—	21.4	24.0	1.9	1d.	—	—	—	—	—	—	—	—	1½	9.1	—

(a) Included under working profit. (b) And deferred shares. (c) After deferred shares participation. † Capital Repayment.

DEVELOPMENT AND MILLING RESULTS

(Cumulative and comparative "this" financial year to September 30th, 1958 with "last.")

GROUP	COMPANY	Months since year end	TOTAL ORE RESERVES			DEVELOPMENT RESULTS										MILL THROUGHPUT													
						Payability						Tonnage				Gold Recovered						Working Profit							
			Tons (000)	Value (dwt.)	Inch dwt.	Ft. Sampled (000)		%		Av. Value (In. dwt.)		Milled (000)		Cost per Ton		Ounces (000)		Grade (dwt. per ton)		Cost per ounce		Per ton		Per oz.					
						This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last	This	Last				
Gold Fields	Doornfontein	3	1,956	7.4	300	4.6	6.0	87	88	349	427	262	256	60/4	60/1	109.4	104.7	8.4	8.2	144/5	147/1	44/4	42/8	106/3	104/3				
	Libanon	3	2,463	4.7	227	5.0	5.5	68	62	352	261	294	307	47/9	45/9	69.1	68.7	4.7	4.5	203/-	204/7	11/2	10/6	47/6	46/9				
	Luipaards Vlei	3	1,628	4.4	176	4.0	5.6	63	64	272	222	210	223	41/8	45/2	36.1	39.5	3.4	3.5	242/3	255/-	1/6	L7d.	8/8	L 3/6				
	Rietfontein C.	9	194	5.1	263	6.0	4.6	48	48	472	429	192	219	46/5	44/11	44.7	50.9	4.7	4.6	199/3	193/4	11/10	13/4	50/8	57/3				
	Robinson	9	1,338	4.5	246	4.9	6.3	37	40	315	348	650	682	52/4	48/8	138.4	139.2	4.3	4.1	245/9	238/3	10d.	2/7	4/1	12/6				
	Simmer	9	994	4.2	187	16.3	17.5	36	40	279	293	790	865	44/5	42/5	150.8	160.0	3.8	3.7	232/10	229/6	3/3	3/10	16/10	21/2				
	Sub Nigel	3	717	7.9	299	5.3	6.2	27	23	319	293	200	200	52/7	55/2	48.1	50.5	4.8	5.1	218/3	218/-	7/10	8/5	32/5	33/4				
	Venterspost	3	2,157	5.6	311	12.0	10.1	63	60	472	412	391	374	52/6	50/5	96.5	89.4	4.9	4.8	212/10	210/11	9/4	9/9	37/8	40/8				
	Vlakfontein	9	1,566	4.0	427	19.3	23.0	39	46	325	375	446	447	53/11	54/11	157.5	159.7	7.1	7.1	152/7	153/10	34/3	34/5	96/11	96/3				
	Vogels	9	2,321	5.3	324	27.1	31.0	25	28	262	280	860	889	46/11	47/3	192.4	205.7	4.5	4.6	209/9	204/2	9/2	10/11	41/-	47/3				
W. Drie	3	2,546	16.8	717	5.4	4.2	95	100	667	714	240	225	82/10	82/1	229.1	215.3	19.1	19.1	86/9	85/9	156/4	158/5	163/10	165/7					
Anglo American	Brakpan	9	2,367	5.0	254	20.5	28.8	24	27	733	708	1,115	972	31/4	40/1	148.6	164.3	2.7	3.4	235/1	237/-	2/2	2/6	16/1	15/-				
	Dagga	9	10,246	5.4	232	20.3	19.9	42	22	438	316	2,087	2,051	30/1	30/10	433.8	449.1	4.2	4.4	144/10	141/-	22/1	24/4	106/3	111/2				
	E. Dagga	9	4,686	4.4	162	15.8	18.7	26	39	320	525	822	852	35/2	34/2	136.2	141.0	3.3	3.3	212/2	206/4	6/4	7/7	38/1	45/10				
	F. S. Geduld	12	2,435	19.8	912	14.3	12.2	94	99	1,439	1,348	803	647	78/10	78/-	575.5	380.1	14.3	11.7	110/-	132/10	100/11	69/10	140/9	118/10				
	Lorraine	12	1,045	4.6	190	17.9	34.9	25	28	432	383	813	757	53/1	50/9	153.9	147.5	3.8	3.9	280/5	260/8	L5/10	L1/9	L30/11	L 8/11				
	P. Brand	12	3,588	17.7	918	12.5	9.0	85	90	1,295	1,200	990	764	64/7	65/10	736.6	581.4	14.9	15.2	86/10	86/6	122/1	125/10	164/1	165/4				
	P. Steyn	12	4,344	8.3	373	15.8	24.1	74	69	462	528	1,144	1,098	54/6	52/8	437.0	420.6	7.6	7.7	142/8	137/5	41/9	43/11	109/3	114/9				
	S. A. Lands	9	3,643	5.6	242	11.9	12.8	45	34	472	469	804	812	39/4	38/2	164.9	171.6	4.1	4.2	191/11	180/4	12/1	14/5	59/1	68/3				
	Springs	9	1,965	4.3	182	8.3	6.6	35	38	523	426	1,144	1,129	26/9	26/8	128.9	124.4	2.3	2.2	237/3	241/3	1/6	1/2	13/6	10/11				
	Vaal Reefs	9	1,813	10.0	397	24.7	17.0	74	79	531	558	647	549	61/6	58/-	291.8	241.7	9.0	8.8	136/3	131/8	51/8	52/10	114/7	120/2				
Welkom	12	3,632	7.1	321	17.0	13.4	68	70	456	410	1,027	1,024	57/9	53/6	305.5	267.8	5.9	5.2	194/1	204/8	17/2	13/4	57/8	51/2					
Central Mining	W. Holdings	12	4,330	15.0	705	14.4	19.2	90	91	1,188	1,271	1,169	1,114	55/7	54/10	634.8	538.1	10.9	9.7	102/4	113/6	80/6	66/11	148/4	138/7				
	W. Reefs	9	4,546	5.9	255	22.4	32.5	54	46	450	511	1,009	1,093	47/6	43/9	238.2	239.0	4.7	4.4	201/4	201/3	11/8	11/3	49/7	51/6				
	Blyvoor	3	6,117	13.7	604	1.9	4.1	97	90	713	703	310	316	68/5	63/3	200.5	188.2	12.9	11.9	105/9	106/2	93/8	86/7	144/9	145/4				
	City Deep	9	4,015	5.8	243	9.7	18.6	41	32	295	289	1,172	1,335	47/5	47/1	229.9	262.8	3.9	3.9	241/10	239/2	1/7	2/3	7/11	11/4				
	Cons. M.R.	9	1,536	4.9	219	4.0	4.6	22	28	340	261	395	497	37/3	34/9	61.9	71.0	3.1	2.9	237/7	243/3	2/1	1/2	13/2	8/3				
	Crown	9	7,599	4.8	216	17.2	27.0	31	33	284	318	2,069	2,150	36/8	36/5	314.7	313.2	3.0	2.9	241/5	250/4	1/4	3d.	8/10	2d.				
	Durban Deep	9	8,445	4.0	240	30.9	23.9	53	50	313	392	1,636	1,647	39/7	38/5	295.9	289.4	3.6	3.5	218/9	218/5	5/7	5/8	31/-	31/11				
	E. Rand Prop.	9	5,590	6.4	302	6.1	8.8	36	51	440	410	2,009	1,968	50/2	50/3	509.2	504.6	5.1	5.1	198/-	195/10	13/1	14/-	51/9	54/8				
	Harmony	3	2,292	8.6	452	2.1	3.8	96	91	535	686	277	260	68/9	57/11	109.5	103.4	7.9	8.0	173/11	145/3	30/4	42/1	76/8	105/9				
	Modder E.	3	1,223	3.4	138	1.1	0.7	29	17	151	174	412	425	24/2	24/10	40.2	42.9	2.0	2.0	247/9	246/4	3d.	6d.	2/9	5/2				
J.C.L.	Rose Deep	9	4,233	4.3	232	2.7	1.9	44	37	280	450	502	447	31/8	37/8	65.2	67.5	2.6	3.0	244/-	249/8	8d.	2d.	5/4	1/1				
	T'vaal G.M.E.	9	53	9.4	—	1.3	5.9	54	19	431	340	138	119	40/7	61/2	22.1	26.4	3.2	4.4	253/4	275/9	3/5	4/1	21/4	18/3				
	E. Champ d'Or	9	167	1.0	31	8.1	5.0	37	66	42	38	113	107	—	—	3.0	3.1	0.5	0.6	—	—	—	—	—	—				
	Freddies C.	9	1,292	5.6	224	4.3	6.7	58	66	408	396	471	512	—	—	136.0	141.1	5.8	5.5	—	—	—	—	—	—				
	Govt. G.M.A.	9	662	5.7	382	1.3	1.5	31	40	274	411	562	895	48/6	44/7	94.8	151.6	3.4	3.4	287/4	263/2	4d.	L1/3	2/2	L7/6				
	Randfontein	9	537	4.5	230	0.4	1.6	50	31	430	173	253	1,843	—	—	39.8	190.0	3.1	2.1	—	—	—	—	—	—				
	E. Geduld	9	9,300	6.0	312	4.6	7.6	50	51	222	238	1,151	1,238	34/9	33/7	354.0	380.1	6.2	6.1	113/1	109/4	42/-	43/4	136/7	141/-				
	Geduld Prop.	9	800	3.6	205	5.2	7.0	46	41	368	238	707	891	38/1	34/9	115.3	141.2	3.3	3.2	233/6	219/6	2/8	5/-	16/4	31/7				
	Grootvlei	9	14,000	4.5	212	13.0	15.4	35	45	204	204	1,770	1,759	31/5	31/-	376.8	376.0	4.3	4.3	147/9	144/1	21/8	22/7	101/10	105/6				
	Marievale	9	5,200	5.3	244	18.6	17.1	31	32	233	228	647	639	42/3	42/2	169.6	167.9	5.2	5.3	161/-	160/5	23/3	23/8	88/8	90/-				
Union Corporation	St. Helena	9	3,250	6.1	342	16.4	11.7	45	53	479	393	1,065	1,045	41/9	40/10	312.4	304.6	5.9	5.8	142/3	140/-	31/6	32/2	107/5	110/4				
	Van Dyk	9	450	4.0	192	8.1	10.5	19	32	301	306	687	697	39/4	40/8	126.2	120.6	3.7	3.5	214/6	235/3	6/6	2/8	35/5	15/3				
	Buffelsfontein	3	2,217	9.6	553	8.0	6.2	99	95	687	570	355	334	53/3	50/1	119.6	108.7	6.7	6.5	158/2	153/9	31/1	31/9	92/4	97/6				
	Ellaton	3	533	7.5	312	1.0	2.2	76	77	471	406	96	98	38/-	39/4	22.4	21.7	4.7	4.4	162/10	178/10	20/5	15/10	87/7	72/2				
	Stillfontein	9	4,361	9.9	388	11.8	11.4	83	93	445	468	1,025	906	55/10	54/5	508.1	405.8	9.9	9.0	112/8	121/5	68/-	57/10	137/1	129/2				
	S. Roodepoort	3	1,093	4.9	230	4.4	3.8	21	34	297	313	90	89	43/4	42/1	21.3	20.8	4.7	4.7	183/5	180/2	15/8	16/5	66/5	70/5				
	W. Rand Cons.	9	5,264	3.4	170	13.7	16.5	74	68	353	348	1,599	1,960	—	—	184.3	199.6	2.0	2.0	—	—	—	—	—	—				
	Hartebeest	3	2,453	9.7	383	9.4	8.0	95	98	479	488	261	258	65/6	63/8	142.7	142.8	10.9	11.1	119/10	115/1	71/5	75/4	130/7	136/2				
	Rand Leases	3	2,193	4.2	188	5.4	6.2	49	51	266	277	535	520	35/9	38/5	78.2	82.1	2.9	3.2	244/4	242/11	10d.	1/3	3/6	8/2				
	Village M.R.	3	—	—	—	—	—	—	—	—																			

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA, LIMITED

GOLD MINING COMPANIES' DIRECTORS' REPORTS FOR THE QUARTER ENDED 30th SEPTEMBER, 1958

(All Companies mentioned are incorporated in the Union of South Africa)

DEVELOPMENT VALUES

The development values in all these Companies' Reports represent actual results of sampling, no allowance having been made for adjustments which are necessary in estimating ore reserves.

FREE STATE GEDULD MINES, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £2,500,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	216,000	205,000
Ounces fine	155,257	147,046
Yield per ton—dwt.	14.38	14.35
Cost per ounce	108s. 5d.	109s. 0d.
Revenue per ton milled	179s. 11d.	178s. 11d.
Cost per ton milled	77s. 11d.	78s. 2d.
Profit per ton milled	102s. 0d.	100s. 9d.
WORKING RESULTS		
Working revenue	£1,943,490	£1,834,531
Working costs	841,441	801,466
Working Profit	£1,102,049	£1,033,065

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £15,887.

The estimated working profit for the year ended 30th September, 1958, was £4,050,447. (30th September, 1957—£2,254,060.)

Interest charges for the year ended 30th September, 1958, amounted to £168,039. (30th September, 1957—£432,239.)

No taxation and no share of profit are as yet payable to the Government.

CAPITAL EXPENDITURE		
Total expenditure	£331,246	£267,431
Underground development charged to capital included in the above	£4,000	£24,000
The total expenditure for year ended 30th September, 1958, was	£755,860	

DIVIDEND—Dividend No. 3 of 3s. 6d. per share was declared payable to members registered in the books of the company on 30th September, 1958, and to persons presenting the relevant coupons detached from share warrants to bearer.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme a sales quota of 381,210 lb. of uranium oxide for the six months ending 31st December, 1958. The uranium grade of the company's residue slimes is uneconomic and the company is thus not an active participant in the joint scheme.

DEVELOPMENT		
Footage driven	23,664	21,651
Sampled		
Feet	3,915	3,130
Average value—dwt. per ton	323.82	261.35
Width—inches	4.87	5.20
Equivalent inch-dwt.	1,577	1,359
Payable		
Feet	3,645	2,960
Percentage	93.1	94.6
Average value—dwt. per ton	345.49	276.25
Width—inches	4.88	5.18
Equivalent inch-dwt.	1,686	1,431

The results obtained in the vicinity of the individual shafts were:—

NO. 1 SHAFT AREA		
Sampled		
Feet	1,485	1,130
Average value—dwt. per ton	168.16	138.04
Width—inches	5.15	6.23
Equivalent inch-dwt.	866	860
Payable		
Feet	1,230	975
Percentage	82.8	86.3
Average value—dwt. per ton	197.31	155.80
Width—inches	5.20	6.29
Equivalent inch-dwt.	1,026	980
NO. 2 SHAFT AREA		
Sampled		
Feet	2,430	2,000
Average value—dwt. per ton	426.96	355.19
Width—inches	4.71	4.62
Equivalent inch-dwt.	2,011	1,641
Payable		
Feet	2,415	1,985
Percentage	99.4	99.3
Average value—dwt. per ton	429.51	357.02
Width—inches	4.71	4.63
Equivalent inch-dwt.	2,023	1,653

FREE STATE GEDULD MINES, LTD. *Continued*

SHAFT SINKING—No. 2 Ventilation Shaft. This shaft was sunk 1,558 feet to a depth of 2,400 feet below the collar.

ORE RESERVE—The payable ore reserve as at 30th September, 1958, was estimated at 2,435,000 tons of an average value of 19.80 dwt. over a stopping width of 46.04 inches.

Compared with the ore reserve at 30th September, 1957, the present figures show an increase of 536,000 tons, an increase in value of 1.06 dwt. and the stopping width has decreased by 0.91 inch.

DAGGAFONTEIN MINES, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £1,750,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	723,000	712,000
Ounces fine	148,562	147,521
Yield per ton—dwt.	4.11	4.14
Cost per ounce	143s. 8d.	144s. 11d.
Revenue per ton milled	51s. 5d.	51s. 9d.
Cost per ton milled	29s. 6d.	30s. 0d.
Profit per ton milled	21s. 11d.	21s. 9d.
Uranium		
Tons treated	382,231	377,994
Uranium oxide produced—lb.	151,115	144,140
Yield per ton—lb.	0.395	0.381
WORKING RESULTS		
Gold—Working revenue	£1,859,078	£1,841,873
—Working costs	1,067,095	1,068,780
—Working profit	£791,983	£773,093
Uranium and Sulphuric Acid—Working profit (estimated)	436,000	422,000
Total Working Profit	£1,227,983	£1,195,093

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £15,715.

The estimated working profit for the nine months ended 30th September, 1958, was £3,565,915 (30th September, 1957—£3,750,761).

TAXATION AND GOVERNMENT'S SHARE OF PROFITS—Estimated liability for the nine months ended 30th September, 1958—£1,970,792.

URANIUM AND SULPHURIC ACID PLANT LOANS

Quarterly instalment, comprising redemption and interest	£140,776	£140,776
CAPITAL EXPENDITURE	£12,874	Nil

The total net expenditure for the nine months ended 30th September, 1958, was £12,874.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Company a sales quota of 286,130 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT		
Main Reef Leader		
Footage driven	4,680	4,032
Sampled		
Feet	3,920	3,490
Average gold value—dwt. per ton	8.43	10.21
Width—inches	21.49	19.81
Equivalent inch-dwt.	181	202
Payable		
Feet	1,725	1,775
Percentage	44.0	50.9
Average gold value—dwt. per ton	16.00	16.90
Width—inches	20.73	20.46
Equivalent inch-dwt.	332	346
Kimberley Reef		
Footage driven	3,751	3,933
Sampled		
Feet	3,705	3,760
Average gold value—dwt. per ton	6.46	3.46
Width—inches	49.20	40.33
Equivalent inch-dwt.	318	140
Payable (gold)		
Feet	1,815	800
Percentage	49.0	21.3
Average gold value—dwt. per ton	11.28	9.81
Average uranium oxide value—lb. per ton	0.71	0.46
Width—inches	50.47	43.78
Equivalent inch-dwt.	569	429
Equivalent inch-lb.	35.68	20.31

EAST DAGGAFONTEIN MINES, LIMITED

ISSUED CAPITAL (In shares of 10s. each) £1,865,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	281,000	275,500
Ounces fine	46,272	45,770
Yield per ton—dwt.	3.29	3.32
Cost per ounce	211s. 5d.	211s. 10d.
Revenue per ton milled	41s. 3d.	41s. 5d.
Cost per ton milled	34s. 10d.	35s. 2d.
Profit per ton milled	6s. 5d.	6s. 3d.
WORKING RESULTS		
Working revenue	£579,103	£570,525
Working costs	489,075	484,838
Working Profit	£90,028	£85,687

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £4,892.

The estimated working profit for the nine months ended 30th September, 1958, was £264,867. (30th September, 1957—£322,958.)

TAXATION AND GOVERNMENT'S SHARE OF PROFITS—Estimated liability for the nine months ended 30th September, 1958—£101,954.

CAPITAL EXPENDITURE £2,018 Nil
The total net expenditure for the nine months ended 30th September, 1958, was £2,018.

DEVELOPMENT		
Main Reef Leader		
Footage driven	1,667	1,715
Sampled		
Feet	1,380	1,385
Average gold value—dwt. per ton	11.04	12.94
Width—inches	10.97	8.18
Equivalent inch-dwt.	121	106
Payable		
Feet	475	415
Percentage	34.4	30.0
Average gold value—dwt. per ton	18.97	24.48
Width—inches	12.61	9.28
Equivalent inch-dwt.	239	227
Kimberley Reef		
Footage driven	4,016	4,892
Sampled		
Feet	3,550	4,305
Average gold value—dwt. per ton	34.76	19.52
Width—inches	4.64	4.09
Equivalent inch-dwt.	161	80
Payable		
Feet	1,275	730
Percentage	35.9	17.0
Average gold value—dwt. per ton	61.72	49.92
Width—inches	6.38	5.90
Equivalent inch-dwt.	394	295

SPRINGS MINES, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £2,527,500

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	389,000	383,000
Ounces fine	44,890	42,470
Yield per ton—dwt.	2.31	2.22
Cost per ounce	237s. 9d.	236s. 8d.
Revenue per ton milled	28s. 10d.	27s. 8d.
Cost per ton milled	27s. 5d.	26s. 3d.
Profit per ton milled	1s. 5d.	1s. 5d.
WORKING RESULTS		
Working revenue	£561,567	£529,439
Working costs	533,608	502,641
Working profit	£27,959	£26,798

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £4,603.

The estimated working profit for the nine months ended 30th September, 1958, was £86,896. (30th September, 1957—£67,878.)

TAXATION AND GOVERNMENT'S SHARE OF PROFITS—Estimated liability for the nine months ended 30th September, 1958—£18,189.

CAPITAL EXPENDITURE Nil Nil
No capital expenditure was incurred during the nine months ended 30th September, 1958.

DEVELOPMENT		
Total Development—feet	4,090	3,246
Sampled		
Feet	3,345	2,790
Average gold value—dwt. per ton	10.95	20.25
Width—inches	13.75	13.39
Equivalent inch-dwt.	151	271
Payable		
Feet	865	1,145
Percentage	25.9	41.0
Average gold value—dwt. per ton	25.90	39.45
Width—inches	14.92	14.19
Equivalent inch-dwt.	386	560

PRESIDENT BRAND GOLD MINING COMPANY, LIMITED

ISSUED CAPITAL (In units of stock of 5s. each) £3,510,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	292,000	263,000
Ounces fine	215,275	196,625
Yield per ton—dwt.	14.74	14.95
Cost per ounce	83s. 11d.	86s. 10d.
Revenue per ton milled	184s. 7d.	186s. 6d.
Cost per ton milled	61s. 11d.	64s. 11d.
Profit per ton milled	122s. 8d.	121s. 7d.
Uranium (Joint Production Scheme)		
Tonnage entitlement of this company	218,031	211,489
Lb. apportioned	54,723	55,000
Yield per ton on lb. apportioned	.251	.260
WORKING RESULTS		
Gold—Working revenue	£2,495,181	£2,452,423
Working costs	963,613	853,482
—Working profit	1,791,568	1,598,941
Uranium—Working profit (estimated)	126,000	122,000
Total Working Profit	£1,917,568	£1,720,941

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £20,560.

The estimated working profit for the year ended 30th September 1958, was £6,558,345. (30th September, 1957—£5,287,295.)

Interest charges for the year ended 30th September, 1958, amounted to £35,880. (30th September, 1957—£38,167.)

TAXATION—Estimated liability for the year ended 30th September, 1958—£335,000.

No share of profit is as yet payable to the Government.

CAPITAL EXPENDITURE		
Gold		
(Underground development charged to capital—nil. Previous quarter, £4,000)	£519,086	£429,988
Uranium		
Contribution towards capital cost of President Steyn uranium plant	22,302	22,552
Contribution towards capital cost of Welkom uranium plant	23,234	23,491
Total	£564,622	£476,031

The total for the year ended 30th September, 1958, was £1,898,855.

DIVIDEND—Dividend No. 7 of 2s. 6d. per unit of stock was declared payable to members registered in the books of the company on 30th September, 1958, and to persons presenting the relevant coupons detached from stock warrants to bearer.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme, in which this company is an active participant, a sales quota of 581,210 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT		
Footage driven	16,611	18,198
Sampled		
Feet	2,035	3,140
Average gold value—dwt. per ton	110.37	77.39
Width—inches	9.26	11.14
Equivalent inch-dwt.	1,022	862
Payable (gold)		
Feet	1,590	2,400
Percentage	73.7	76.4
Average gold value—dwt. per ton	153.48	121.01
Average uranium oxide value—lb. per ton	2.09	1.77
Width—inches	8.86	9.15
Equivalent inch-dwt.	1,360	1,107
Equivalent inch-lb.	18.51	16.22

SHAFT SINKING
No. 2 Ventilation Shaft was sunk 665 feet to its final depth of 4,407 feet below the collar. The installation of the main fans is in progress.

No. 2 Sub-Vertical Twin Circular Shafts:
18 ft. Diameter Ventilation Shaft: Development work ancillary to the shaft system is in progress.
34 ft. Diameter Shaft: This shaft was sunk 622 feet to a depth of 2,390 feet below 46 level. Stations were excavated on 64, 66, 68 and 70 levels. The permanent rock hoist is now being installed.

No. 3 Shaft System: Preparations for the sinking of the 24 ft. diameter main shaft and the 20 ft. diameter ventilation shaft are in progress; construction work in general is well advanced and the permanent shaft offices have been completed and occupied. The main shaft collar has been cast and the permanent main hoist, to be used for sinking, is being erected.

No. 3 Joint Ventilation Shaft System: (For the joint account of this company, President Steyn and Welkom Gold Mining companies.)
24 ft. Diameter Shaft: Installation of permanent equipment was completed and the shaft commissioned. Erection of the main fans is in progress.

ORE RESERVE—The payable ore reserve as at 30th September, 1958, was estimated at 3,588,000 tons of an average value of 17.73 dwt. over a stopeing width of 51.78 inches. The average uranium value of the ore reserve was 0.327 lb. of uranium oxide per ton.

Compared with the ore reserve at 30th September, 1957, the present figures show an increase of 545,000 tons, an increase in gold value of 0.10 dwt., a decrease in uranium oxide value of 0.020 lb. per ton and the stopeing width has increased by 1.42 inches.

PRESIDENT STEYN GOLD MINING COMPANY, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £3,500,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	296,000	294,000
Ounces fine	113,047	112,097
Yield per ton—dwt.	7.64	7.63
Cost per ounce	143s. 4d.	143s. 1d.
Revenue per ton milled	95s. 8d.	95s. 2d.
Cost per ton milled	54s. 9d.	54s. 7d.
Profit per ton milled	40s. 11d.	40s. 7d.
Uranium (Joint Production Scheme)		
Tonnage entitlement of this company	218,034	211,489
Lb. apportioned	63,942	64,603
Yield per ton on lb. apportioned	.293	.305
WORKING RESULTS		
Gold—Working revenue	£1,416,385	£1,398,363
—Working costs	809,943	801,747
—Working profit	£606,442	£596,616
Uranium—Working profit (estimated)	178,000	162,000
Total Working Profit	£784,442	£758,616

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £13,098.

The estimated working profit for the year ended 30th September, 1958, was £3,073,899. (30th September, 1957 — £3,152,611.)

Interest charges for the year ended 30th September, 1958 (excluding interest on uranium loans), amounted to £150,991. (30th September, 1957 — £169,470.)

No taxation and no share of profit are as yet payable to the Government.

URANIUM LOANS

Quarterly instalment, comprising redemption

and interest	£122,887	£122,887
CAPITAL EXPENDITURE		
Gold	94,528	96,497
Uranium	678	—
	95,206	96,497

Add: Contributions towards capital cost of Welkom uranium plant

	23,212	23,487
	118,418	119,984
Less: Recoupments from participants in the joint uranium production scheme towards the capital cost of the President Steyn uranium plant	81,017	80,748

Net Total £37,401 £39,236

The net total for the year ended 30th September, 1958, was £84,385.

DIVIDEND—Dividend No. 7 of 1s. 3d. per share was declared payable to members registered in the books of the company on 30th September, 1958, and to persons presenting the relevant coupons detached from share warrants to bearer.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme, in which this company is an active participant, a sales quota of 581,210 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT

Footage driven	16,884	17,152
Basal Reef		
Sampled		
Feet	2,900	3,415
Average gold value—dwt. per ton	33.91	32.97
Width—inches	11.88	11.31
Equivalent inch-dwt.	403	373
Payable (gold)		
Feet	2,520	2,800
Percentage	86.9	82.0
Average gold value—dwt. per ton	37.73	37.80
Average uranium oxide value—lb. per ton	1.11	1.29
Width—inches	11.89	11.48
Equivalent inch-dwt.	449	434
Equivalent inch-lb.	13.21	14.80
Leader Reef		
Sampled		
Feet	435	455
Average gold value—dwt. per ton	2.72	2.20
Width—inches	35.64	52.19
Equivalent inch-dwt.	97	115
Payable (gold)		
Feet	40	60
Percentage	9.2	13.2
Average gold value—dwt. per ton	6.78	5.51
Average uranium oxide value—lb. per ton	0.77	0.34
Width—inches	43.38	69.67
Equivalent inch-dwt.	294	384
Equivalent inch-lb.	33.19	23.48

SHAFT SINKING—No. 3 Joint Ventilation Shaft System (for the joint account of this company, President Brand and Welkom Gold Mining companies).

24 ft. Diameter Shaft: Installation of permanent equipment was completed and the shaft commissioned. Erection of the main fans is in progress.

ORE RESERVE—The payable ore reserve as at 30th September, 1958 was estimated at 4,344,000 tons of an average gold value of 8.34 dwt. over a stopping width of 44.67 inches. The average uranium value of the ore reserve was 0.352 lb. of uranium oxide per ton.

Compared with the ore reserve at 30th September, 1957, the present figures show an increase of 417,000 tons, a decrease in gold value of 0.47 dwt., a decrease in uranium oxide value of 0.015 lb. per ton and the stopping width has increased by 0.42 inch.

THE SOUTH AFRICAN LAND AND EXPLORATION COMPANY, LIMITED

ISSUED CAPITAL (In shares of 3s. 6d. each) £433,125

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	274,500	273,500
Ounces fine	56,717	55,518
Yield per ton—dwt.	4.13	4.06
Cost per ounce	191s. 0d.	191s. 7d.
Revenue per ton milled	51s. 8d.	50s. 7d.
Cost per ton milled	39s. 5d.	38s. 11d.
Profit per ton milled	12s. 3d.	11s. 8d.
WORKING RESULTS		
Working revenue	£709,322	£691,989
Working costs	541,667	531,821
Working Profit	£167,655	£160,168

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £5,923.

The estimated working profit for the nine months ended 30th September, 1958, was £487,427. (30th September, 1957 — £585,594.)

TAXATION AND GOVERNMENT'S SHARE OF PROFITS—Estimated liability for the nine months ended 30th September, 1958 — £119,764.

CAPITAL EXPENDITURE	£62,552	£63,574
The total net expenditure for the nine months ended 30th September, 1958, was £183,891.		

DEVELOPMENT

Mining Lease Area		
Total Development—feet	5,640	5,094
Sampled		
Feet	4,240	3,540
Average gold value—dwt. per ton	9.47	8.78
Width—inches	30.72	26.41
Equivalent inch-dwt.	291	232
Payable		
Feet	2,060	1,680
Percentage	48.6	47.5
Average gold value—dwt. per ton	15.71	14.47
Width—inches	33.45	29.36
Equivalent inch-dwt.	525	425
Outside Mining Lease Area (Withok No. 7)		
Total Development—feet	7,170	6,858
Sampled		
Feet	1,925	1,490
Average gold value—dwt. per ton	9.47	16.60
Width—inches	19.95	26.80
Equivalent inch-dwt.	189	445
Payable		
Feet	600	990
Percentage	31.2	66.4
Average gold value—dwt. per ton	24.82	20.33
Width—inches	20.06	31.39
Equivalent inch-dwt.	498	638

BRAKPAN MINES, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £1,150,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	375,000	381,000
Ounces fine	49,199	49,516
Yield per ton—dwt.	2.62	2.60
Cost per ounce	235s. 5d.	233s. 6d.
Revenue per ton milled	32s. 11d.	32s. 5d.
Cost per ton milled	30s. 11d.	30s. 4d.
Profit per ton milled	2s. 0d.	2s. 1d.
WORKING RESULTS		
Working revenue	£616,605	£617,570
Working costs	579,173	578,057
Working Profit	£37,432	£39,513

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £5,505.

The estimated working profit for the nine months ended 30th September, 1958, was £119,454. (30th September, 1957 — £123,094.)

TAXATION AND GOVERNMENT'S SHARE OF PROFIT—Estimated liability for the nine months ended 30th September, 1958 — £12,820.

CAPITAL EXPENDITURE	Nil	Nil
The total net expenditure for the nine months ended 30th September, 1958 (after taking recoupments into account) was £188.		

DEVELOPMENT

Total Development—feet	8,093	9,870
Sampled		
Feet	5,575	7,465
Average gold value—dwt. per ton	3.42	3.43
Width—inches	70.24	66.21
Equivalent inch-dwt.	240	227
Payable		
Feet	1,415	1,590
Percentage	25.4	21.3
Average gold value—dwt. per ton	11.20	11.01
Width—inches	56.86	66.05
Equivalent inch-dwt.	637	727

WESTERN REEFS EXPLORATION AND DEVELOPMENT COMPANY, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £1,750,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	338,500	343,500
Ounces fine	81,365	80,610
Yield per ton—dwt.	4.81	4.69
Cost per ounce	198s. 6d.	200s. 11d.
Revenue per ton milled	60s. 2d.	58s. 6d.
Cost per ton milled	47s. 9d.	47s. 2d.
Profit per ton milled	12s. 5d.	11s. 4d.
Uranium		
Tons treated	682,858	645,168
Uranium oxide produced—lb.	175,756	162,332
Yield per ton treated—lb.	0.257	0.252
WORKING RESULTS		
Gold—Working revenue	£1,018,187	£1,004,835
—Working costs	807,624	809,923
—Working profit	£210,563	£194,912
Uranium and Sulphuric Acid—Working profit (estimated)	461,000	454,000
Total Working Profit	£671,563	£648,912

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £8,572.

The estimated working profit for the nine months ended 30th September, 1958, was £1,962,599. (30th September, 1957—£1,970,277.)

TAXATION AND GOVERNMENT'S SHARE OF PROFITS—Estimated liability for the nine months ended 30th September, 1958—£793,341.

URANIUM AND SULPHURIC ACID PLANT LOANS

Quarterly instalment, comprising redemption and interest

£169,182 £169,182

CAPITAL EXPENDITURE

The total net expenditure for the nine months ended 30th September, 1958, was £139,789.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the company a sales quota of 338,790 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT

Mining Lease Area

(Including the Goedgenoeg area over which the Minister of Mines has agreed to grant a lease)

Ventersdorp Contact and Elsburg Reefs:

Footage driven 6,829 7,237

Sampled

Feet 3,775 3,690
Average gold value—dwt. per ton 5.62 5.95
Width—inches 37.41 34.00
Equivalent inch-dwt. 210 202

Payable (gold)

Feet 1,480 1,270
Percentage 39.2 34.4
Average gold value—dwt. per ton 10.09 9.58
Average uranium oxide value—lb. per ton 0.28 0.29
Width—inches 38.75 41.11
Equivalent inch-dwt. 391 394
Equivalent inch-lb. 10.75 11.72

Vaal Reef:

Footage driven 9,204 9,733

Sampled

Feet 3,685 3,745
Average gold value—dwt. per ton 26.39 23.95
Width—inches 13.57 13.92
Equivalent inch-dwt. 358 333

Payable (gold)

Feet 2,575 2,490
Percentage 69.9 66.5
Average gold value—dwt. per ton 34.76 40.23
Average uranium oxide value—lb. per ton 2.84 3.13
Width—inches 13.71 11.49
Equivalent inch-dwt. 477 462
Equivalent inch-lb. 38.96 36.00

DEVELOPMENT—Outside Mining Lease Area

(Results of development on Ventersdorp Contact and Elsburg reefs on the Farm Nootgedacht No. 53)

Footage driven 3,961 3,862

Sampled

Feet 2,700 2,785
Average gold value—dwt. per ton 7.31 9.25
Width—inches 31.30 25.39
Equivalent inch-dwt. 229 235

Payable (gold)

Feet 1,160 1,215
Percentage 43.0 43.6
Average gold value—dwt. per ton 10.22 12.13
Average uranium oxide value—lb. per ton 0.27 0.33
Width—inches 39.94 35.56
Equivalent inch-dwt. 408 431
Equivalent inch-lb. 10.94 11.85

WESTERN HOLDINGS LIMITED

ISSUED CAPITAL (In shares of 5s. each) £1,874,094)

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	300,000	295,000
Ounces fine	168,863	164,656
Yield per ton—dwt.	11.26	11.16
Cost per ounce	102s. 4d.	100s. 5d.
Revenue per ton milled	140s. 10d.	139s. 2d.
Cost per ton milled	57s. 7d.	56s. 1d.
Profit per ton milled	83s. 3d.	83s. 1d.
WORKING RESULTS		
Working revenue	£2,113,337	£2,052,869
Working costs	864,296	827,045
Working Profit	£1,249,041	£1,225,824

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £17,448.

The estimated working profit for the year ended 30th September, 1958, was £4,707,616. (30th September, 1957—£3,726,924.)

Interest charges for the year ended 30th September, 1958, amounted to £45,175. (30th September, 1957—£72,598.)

No taxation and no share of profit are as yet payable to the Government.

CAPITAL EXPENDITURE

The total expenditure for the year ended 30th September, 1958, was £1,461,807.

DIVIDEND

Dividend No. 7 of 4s. 0d. per share was declared payable to members registered in the books of the company on 30th September, 1958.

URANIUM OXIDE SALES QUOTA

The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme, a sales quota of 581,210 lb. of uranium oxide for the six months ending 31st December, 1958. The uranium grade of the company's residue slimes is un-economic and the company is thus not an active participant in the joint scheme.

DEVELOPMENT

Footage driven 23,343 21,857

Sampled

Feet 4,190 3,250
Average value—dwt. per ton 249.56 200.35
Width—inches 6.78 4.87
Equivalent inch-dwt. 1,193 976

Payable

Feet 3,710 2,940
Percentage 88.5 90.5
Average value—dwt. per ton 273.72 220.29
Width—inches 4.89 4.86
Equivalent inch-dwt. 1,338 1,071

SHAFT SINKING—No. 3 Circular Shaft System:

24 ft. Diameter Main Shaft. The installation of the main fans is nearing completion.

ORE RESERVE

The payable ore reserve as at 30th September, 1958, was estimated at 4,330,000 tons of an average value of 15.03 dwt. over a stoping width of 46.93 inches.

Compared with the ore reserve at 30th September, 1957, the present figures show an increase of 400,000 tons, an increase in value of 1.04 dwt., and the stoping width has increased by 1.19 inches.

WESTERN DEEP LEVELS, LIMITED

ISSUED CAPITAL: (£850,000 in 850,000 "A" shares of £1 each)

SHAFT SINKING—NO. 2 SHAFT SYSTEM

No. 2 Main Shaft: During the quarter this shaft was advanced 997 feet to a depth of 1,238 feet. In addition, two temporary pump chambers were excavated necessitating 196 feet of development. Water-bearing fissures delayed sinking operations.

No. 2 Ventilation Shaft: This shaft was deepened 385 feet to 1,751 feet. In addition, 48 feet of development was done in cutting two small pump chambers. The intersection of numerous water-bearing fissures necessitating cementation, considerably retarded the rate of sinking.

NO. 3 SHAFT SYSTEM

No. 3 Main Shaft: Sinking operations continued throughout the quarter and this shaft was sunk 1,238 feet to a depth of 1,787 feet. In addition, 170 feet of development was done in a temporary pump chamber.

No. 3 Ventilation Shaft: This shaft was advanced 967 feet to a depth of 3,019 feet. In addition, a start was made on the 3,000 feet intermediate pump station, 127 feet of which was excavated.

BUILDINGS AND PLANT

Workshops: The foundations for the Blacksmiths' Shop were completed and the erection of the steelwork is progressing satisfactorily.

The construction of the garage for housing mine transport was completed.

GENERAL

Roads: The road to No. 3 Shaft was completed, and a start was made on the access road to the married quarters.

European Housing: Of the 33 houses being erected in the mine township, 31 had been completed by the end of the quarter under review.

Power and Water Supply: The power and water reticulation schemes for the mine houses were completed.

Native Compounds: A start was made on the construction of 24 permanent rooms at No. 2 Compound, whilst an additional 6 temporary rooms are nearly complete at No. 3 Compound.

LORAIN GOLD MINES, LIMITED

ISSUED CAPITAL (In shares of 10s. each) £8,226,690

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	221,000	216,000
Ounces fine	42,283	39,950
Yield per ton—dwt.	3.83	3.70
Cost per ounce	282s. 9d.	282s. 8d.
Revenue per ton milled	47s. 11d.	46s. 1d.
Cost per ton milled	54s. 1d.	52s. 3d.
Loss per ton milled	6s. 2d.	6s. 2d.
Uranium (Joint Production Scheme)		
Tonnage entitlement of this company	180,000	175,257
Lb. apportioned	49,202	45,395
Yield per ton on lb. apportioned	.273	.259
WORKING RESULTS		
Gold—Working revenue	£529,655	£498,163
—Working costs	597,770	564,599
—Working loss	68,115	66,436
Uranium—Working profit (estimated)	114,000	101,000
Total Working Profit	£45,885	£34,564

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £4,066.

The estimated working profit for the year ended 30th September, 1958, was £158,336. (30th September, 1957—£253,754).

Interest charges for the year ended 30th September, 1958, amounted to £32,865. (30th September, 1957—£32,948).

No taxation and no share of profit are as yet payable to the Government.

CAPITAL EXPENDITURE

Gold (Underground development charged to capital—nil. Previous quarter—£36,000)	£7,595	£62,852
Uranium		
Contribution towards capital cost of President Steyn uranium plant	18,440	18,697
Contribution towards capital cost of Welkom uranium plant	19,211	19,474
Total	£45,246	£101,023

During the quarter, recoupments on capital stores and equipment sold amounted to £78,158. There was thus an excess of recoupments over capital expenditure amounting to £32,912.

The total expenditure for the year ended 30th September, 1958, was £306,403.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme, in which this company is an active participant, a sales quota of 581,210 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT

Footage driven	11,645	10,695
BASAL REEF		
Sampled		
Feet	1,430	1,065
Average gold value—dwt. per ton	28.69	18.66
Width—inches	4.69	5.11
Equivalent inch-dwt.	134	95
Payable (gold)		
Feet	425	165
Percentage	29.7	15.5
Average gold value—dwt. per ton	39.92	32.04
Average uranium oxide value—lb. per ton	2,246	2,04
Width—inches	6.28	6.58
Equivalent inch-dwt.	251	211
Equivalent inch-lb.	14.11	13.44
"B" REEF		
Sampled		
Feet	2,515	2,050
Average gold value—dwt. per ton	8.60	7.14
Width—inches	26.38	27.99
Equivalent inch-dwt.	227	200
Payable (gold)		
Feet	705	600
Percentage	28.0	29.3
Average gold value—dwt. per ton	28.68	20.68
Average uranium oxide value—lb. per ton	0.695	1.03
Width—inches	22.03	25.67
Equivalent inch-dwt.	632	531
Equivalent inch-lb.	15.30	26.44
RAINBOW REEF		
Sampled		
Feet	425	85
Average gold value—dwt. per ton	6.78	10.77
Width—inches	41.76	37.71
Equivalent inch-dwt.	283	406
Payable (gold)		
Feet	180	60
Percentage	42.4	70.6
Average gold value—dwt. per ton	14.66	19.60
Average uranium oxide value—lb. per ton	0.681	0.98
Width—inches	35.78	26.58
Equivalent inch-dwt.	524	521
Equivalent inch-lb.	24.38	25.93

RAINBOW REEF

Feet	425	85
Average gold value—dwt. per ton	6.78	10.77
Width—inches	41.76	37.71
Equivalent inch-dwt.	283	406
Payable (gold)		
Feet	180	60
Percentage	42.4	70.6
Average gold value—dwt. per ton	14.66	19.60
Average uranium oxide value—lb. per ton	0.681	0.98
Width—inches	35.78	26.58
Equivalent inch-dwt.	524	521
Equivalent inch-lb.	24.38	25.93

OTHER REEFS—No development was accomplished on other reefs.

ORE RESERVE—Estimated payable Ore Reserve as at 30th September, 1958.

Reef	Tons	Stopping Width Inches	Gold Value dwt. per ton	Uranium Value lb. per ton
Basal	325,000	36.2	3.98	0.284
"B"	653,000	43.3	4.85	0.264
Rainbow	67,000	54.4	5.35	0.351
TOTAL	1,045,000	41.3	4.60	0.276

Compared with the total ore reserve as at 30th September, 1957, the present figures show an increase of 1,500 tons, an increase in gold value of 0.39 dwt., an increase in uranium oxide value per ton of 0.068 lb. and the stopping width has decreased by 3.18 inches.

LORAIN GOLD MINES, LIMITED Continued

PROPOSED MERGER WITH RIEBEECK GOLD MINING COMPANY, LIMITED.—The proposals for the merger of the undertaking of the company with that of Riebeeck Gold Mining Company, Limited, were approved by shareholders at extraordinary general meetings of both companies held on 25th September, 1958. On 21st October, 1958, application will be made to the Supreme Court of South Africa for an Order of Court, confirming the reduction of the company's capital and sanctioning the scheme of arrangement, and a further circular will be despatched to shareholders in due course.

CAPITAL.—The issued capital of the company was increased from £8,226,686 to £8,226,690 by the issue, during July, 1958, of eight shares at par, in order to facilitate the proposed reconstruction of the company's capital. The shares were allotted to Security Nominees Limited.

WELKOM GOLD MINING COMPANY LIMITED

ISSUED CAPITAL (In shares of 5s. each) £3,625,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	274,000	265,000
Ounces fine	81,345	78,831
Yield per ton—dwt.	5.94	5.95
Cost per ounce	192s. 8d.	192s. 7d.
Revenue per ton milled	74s. 4d.	74s. 2d.
Cost per ton milled	57s. 3d.	57s. 3d.
Profit per ton milled	17s. 2d.	16s. 11d.
Uranium (Joint Production Scheme)		
Tonnage entitlement of this company	218,034	211,490
Lb. apportioned	59,849	62,604
Yield per ton on lb. apportioned	.274	.296
WORKING RESULTS		
Gold—Working revenue	£1,019,371	£982,964
—Working costs	783,738	759,089
—Working profit	235,633	223,875
Uranium—Working profit (estimated)	166,000	162,000
Total Working Profit	£401,633	£385,875

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £8,469.

The estimated working profit for the year ended 30th September, 1958, was £1,526,213. (30th September, 1957—£959,565.)

Interest charges for the year ended 30th September, 1958 (excluding interest on uranium loans), amounted to £176,203. (30th September, 1957—£159,306.)

No taxation and no share of profit are as yet payable to the Government.

URANIUM LOANS

Quarterly instalment comprising redemption and interest	£127,645	£127,645
CAPITAL EXPENDITURE		
Gold	310,656	226,785
Uranium	199	10,417
	310,855	237,202
Add: Contribution towards capital cost of President Steyn uranium plant	22,280	22,547
	333,135	259,749
Less: Recoupments from participants in the joint uranium production scheme towards the capital cost of the Welkom uranium plant	84,402	84,108
Net Total	£248,733	£175,641

The net total for the year ended 30th September, 1958 was £724,756.

DIVIDEND—Dividend No. 3 of 3d. per share was declared payable to members registered in the books of the company on 30th September, 1958.

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the Orange Free State joint uranium production scheme, in which this company is an active participant, a sales quota of 581,210 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT

Footage driven	19,435	16,867
Sampled		
Feet	6,630	4,445
Average gold value—dwt. per ton	44.82	27.70
Width—inches	8.31	10.58
Equivalent inch-dwt.	372	293
Payable (gold)		
Feet	4,805	2,630
Percentage	72.5	59.2
Average gold value—dwt. per ton	53.55	42.52
Average uranium oxide value—lb. per ton	3.00	2.24
Width—inches	9.15	10.63
Equivalent inch-dwt.	490	452
Equivalent inch-lb.	27.46	23.85

SHAFT SINKING

No. 1 Shaft: The deepening of this shaft was continued and advanced 22 feet to a depth of 4,476 feet; development of the ore-pass system is in progress, and 45 level station and the conveyor belt cross-cut have been excavated.

No. 1 Vertical Ventilation Winze: This winze was sunk 870 feet to its final depth of 1,726 feet below the collar and holed into the workings of the mine. The main fan installation is in progress.

No. 2 Shaft: The deepening of this shaft was resumed and advanced 50 feet to a depth of 3,750 feet below collar.

No. 3 Joint Ventilation Shaft System (for the joint account of this company, President Brand and President Steyn Gold Mining Companies).

24 ft. Diameter Shaft: Installation of permanent equipment was completed and the shaft commissioned. Erection of the main fans is in progress.

ORE RESERVE—The payable ore reserve as at 30th September, 1958, was estimated at 3,632,000 tons of an average gold value of 7.10 dwt. over a stopping width of 45.16 inches. The average uranium value of the ore reserve was 0.339 lb. of uranium oxide per ton.

Compared with the ore reserve at 30th September, 1957, the present figures show an increase of 161,000 tons, an increase in gold value of 0.58 dwt., an increase in uranium oxide value of 0.024 lb. per ton and the stopping width has decreased by 1.15 inches.

VAAL REEFS EXPLORATION AND MINING COMPANY, LIMITED

ISSUED CAPITAL (In shares of 5s. each) £2,625,000

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold		
Tons milled	231,000	215,500
Ounces fine	105,033	96,979
Yield per ton—dwt.	136s. 9.09	137s. 11d.
Cost per ounce	113s. 10d.	112s. 2d.
Revenue per ton milled	61s. 10d.	62s. 1d.
Cost per ton milled	52s. 0d.	50s. 1d.
Profit per ton milled		
Uranium		
Tons treated	228,406	214,201
Uranium oxide produced—lb.	147,745	147,390
Yield per ton treated—lb.	0.647	0.688
WORKING RESULTS		
Gold—Working revenue	£1,314,934	£1,208,441
—Working costs	714,573	668,606
—Working profit	£600,361	£539,835
Uranium—Working profit (estimated)	426,000	402,000
Total Working Profit	£1,026,361	£941,835

In addition, revenue received in respect of gold sold to the Reserve Bank for the period February/July, 1958, amounted to £10,432.

The estimated working profit for the nine months ended 30th September, 1958, was £2,859,233. (30th September, 1957—£2,438,632).

No taxation and no share of profits are as yet payable to the Government.

URANIUM PLANT LOANS

Quarterly instalment, comprising redemption and interest

CAPITAL EXPENDITURE	£70,158	£70,158
Underground development charged to capital expenditure and included in the above	£243,690	£466,932
	(£27,000)	(£60,000)

The total net expenditure for the nine months ended 30th September, 1958, was £909,584.

London Office:
40 Holborn Viaduct, E.C.1.
15th October, 1958.

VAAL REEFS EXPLORATION AND MINING COMPANY, LIMITED *Continued*

URANIUM OXIDE SALES QUOTA—The Atomic Energy Board has allocated to the company a sales quota of 285,140 lb. of uranium oxide for the six months ending 31st December, 1958.

DEVELOPMENT

Total development—feet	26,330	26,799
Sampled		
Feet	7,420	8,305
Average gold value—dwt. per ton	76.26	77.92
Width—inches	5.77	5.39
Equivalent inch-dwt.	440	420
Payable (gold)		
Feet	5,535	6,065
Percentage	74.6	73.0
Average gold value—dwt. per ton	96.71	94.60
Average uranium oxide value—lb. per ton	7.09	7.71
Width—inches	5.77	5.74
Equivalent inch-dwt.	558	543
Equivalent inch-lb.	40.90	44.23

NO. 2 SHAFT SYSTEM

Shaft Sinking—The Main Shaft was sunk to a depth of 75 feet by the civil contractors and the installation of the collar is in progress.

Buildings and Plant—Excavations for the winder foundations have been completed and the concreting of these foundations is proceeding.

A 20-inch air main from No. 1 shaft compressor to the site of the new shaft was completed.

GENERAL—Power Supply—The installation of the overhead power line is in progress.

Roads—The construction of the permanent road from No. 1 shaft to the new shaft site is proceeding.

For and on behalf of
ANGLO AMERICAN CORPORATION OF SOUTH AFRICA, LIMITED.

R. V. PRITCHARD, Joint London Secretary.

It could thus happen that the easing of the credit squeeze accompanied by an energetic programme of industrial development in an economy, which already has virtually no unemployment, might quite rapidly bring about a new inflationary surge. Moreover, the tendency for wages to rise (among European workers at least) would certainly not be reduced by the implementation of job reservation.

This prospect has a significance beyond the immediate outlook for the marginal mines, as with the growing opportunities for employment in industry, the gold mining industry as a whole is going to find it increasingly difficult to step up its recruitment of European labour; and it is here that the immediate bottle-neck exists on recruitment for the newer mines

to meet expanding production programmes. In this connection it will be recalled that Mr. Spiro, Anglo American manager, who is now chairman of this group's O.F.S. mines, pointed out in his first addresses to shareholders earlier this year that European labour strengths were still inadequate, and that there was no immediate prospect of relief in spite of recruiting efforts in the Union and abroad.

The most important single influence on the market during the past three months has undoubtedly been the launching of the American-South African Investment Co. This trust received S.E.C. approval in New York during the latter part of August and dealings commenced towards the end of September.

One interesting consequence of the success of the A.S.A.I.C. operation has been the firmness of the shares of the finance houses, which have come in for buying on the strength of the profits which must have accrued from the sale of the shares now in the trust's portfolio. These were made available by the groups in approximately the following proportions: Anglo American £4,750,000; General Mining £2,000,000; Anglo-Transvaal £2,000,000; New Union £400,000 and Union Corporation £250,000. Some of the holding companies also came in for buying on the assumption that the groups had probably laid off part of their sales by purchase from these sources.

(Continued on page 16)

At right is a close-up of some of the rubber-lined tanks in the uranium oxide extraction plant at the Hartebeestfontein mine



THE CENTRAL MINING—RAND MINES GROUP

South African Mining Companies' Directors' Reports for Quarter ended 30th September, 1958
Office of the London Secretaries: 4 London Wall Buildings, E.C.2

The development values quoted hereunder represent actual results of sampling, no allowance having been made for any adjustments which may be necessary when estimating ore reserves at the ends of the respective financial years

BLYVOORUITZICHT GOLD MINING COMPANY, LIMITED

Ore Milled 310,000 tons.	Slimes treated for Uranium Oxide 519,841 tons.
GOLD YIELD	URANIUM OXIDE YIELD
Oz. fine Dwt. per ton	Lbs. Lb. per ton
200,472 12.934	173,405 0.334
	Per Ton Milled
	s. d.
Working Revenue	£2,511,497 162 1
Working Expenditure	1,060,027 68 5
WORKING PROFIT	£1,451,470 93 8

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £19,735, profit from uranium and sulphuric acid £482,522, and sundry revenue (net) £36,500, less interest on Uranium and Sulphuric Acid Plant Loan £30,500, the Total Profit was £1,959,727.

Taxation and Lease Consideration was £1,061,100.

URANIUM AND SULPHURIC ACID PLANTS LOAN ACCOUNT.—Quarterly instalment—Capital Repayment Dr. £126,800.

CAPITAL EXPENDITURE.—Capital Expenditure on shaft sinking, equipment, etc., amounted to £70,800, which included £4,400 expended in connection with the uranium and sulphuric acid plants.

URANIUM PRODUCTION.—In the Report of the Directors, for the year ended 30th June, 1958, it is stated that of the total figure of 6,200 tons of U308 to be sold by the Industry to the Combined Development Agency annually from 1st July, 1958, the Company had been allotted a quota of 164.5 tons for the six months ending 31st December, 1958. In order to provide an increase in the quantity of U308 originally allocated to one of the producers operating on a small scale, the quotas allocated to the other producers have been scaled down on a pro rata basis, and this Company's participation for the six months, 1st July to 31st December, 1958, has now been fixed at 326,860 lb.

DEVELOPMENT totalled 12,298 feet.

Reef	Footage Sampled	Feet	%	PAYABLE DISCLOSURES		
				Gold Channel Value, dwt./ton	Uranium Oxide Channel Value, Lb./ton	
Carbon Leader ..	1,945	1,880	96.7	89.1	3.844	

CROWN MINES, LIMITED

Ore Milled 707,000 tons.	Yield 106,649 oz. fine.	Yield per ton 3.017 dwt.
		Per Ton Milled
		s. d.
Working Revenue	£1,335,314 37 9	
Working Expenditure	1,288,284 36 5	
WORKING PROFIT	£47,030 1 4	

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £11,915, and sundry revenue £14,400, the Total Profit was £73,345.

Taxation £5,900.
Capital Expenditure on equipment, etc. (net) £10,400. Property (Cr.) £2,100.

DEVELOPMENT totalled 10,309 feet.

Reef	Footage Sampled	Feet	%	PAYABLE DISCLOSURES		
				Channel Value, Dwt.	Channel Width, Inches	
Kimberley Reef ..	270	—	—	—	—	
South Reef	1,720	560	32.6	8.0	34	
Main Reef Leader ..	1,090	760	69.7	15.6	20	
Main Reef	2,745	490	17.9	5.9	41	
Totals and Averages ..	5,825	1,810	31.1	9.3	30	

MODDERFONTEIN EAST, LIMITED

Ore Milled 412,000 tons.	Yield 40,181 oz. fine.	Yield per ton 1.951 dwt.
		Per Ton Milled
		s. d.
Working Revenue	£503,654 24 5	
Working Expenditure	498,048 24 2	
WORKING PROFIT	£5,606 0 3	

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £4,228, and Sundry Revenue, £2,800, the Total Profit was £12,634.

Taxation and Mineral Lease Consideration £2,000.

DEVELOPMENT totalled 1,516 feet.

Reef	Footage Sampled	Feet	%	PAYABLE DISCLOSURES		
				Channel Value, Dwt.	Channel Width, Inches	
Main Reef Leader ..	1,075	315	29.3	5.6	27	

HARMONY GOLD MINING COMPANY, LIMITED

Ore Milled 277,000 tons.	Slimes treated for Uranium Oxide 275,194 tons.
GOLD YIELD	URANIUM OXIDE YIELD
Oz. fine Dwt. per ton	Lbs. Lb. per ton
109,529 7.908	132,760 0.482
	Per Ton Milled
	s. d.
Working Revenue	£1,372,057 99 1
Working Expenditure	952,285 68 9
WORKING PROFIT	£419,772 30 4

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £10,105, profit from uranium and pyrite, £387,286 and sundry revenue £11,400 less interest on uranium and pyrite flotation plants loan, £28,500 and interest on Central Mining Finance Limited loan £30,400, the Net Profit was £769,863.

Dividend No. 5 of 1s. per share, declared on 19th September, 1958, £900,000.

URANIUM AND PYRITE FLOTATION PLANTS LOAN ACCOUNT.—Quarterly instalment—Capital Repayment (Dr.) £89,600.

CAPITAL EXPENDITURE.—Capital Expenditure on property, shaft sinking equipment, etc., (net) amounted to £557,600, which includes £10,200 expended in connection with the uranium and pyrite flotation plants and £141,500 in connection with the expansion of the gold and uranium plant.

EXPANSION OF OPERATIONS.—Gold Reduction Plant: The third unit of the gold plant is in commission.

PYRITE FLOTATION PLANT.—The plant treated 273,632 tons during the quarter with a sulphur extraction of 1.078 per cent.

Preparatory work on the extension of the plant to a capacity of 120,000 tons per month has commenced.

UNDERGROUND WATER.—The present daily (24 hours) pumping capacity remained at 10 million gallons. Additional pumping units are in course of erection at No. 2 Shaft. The average quantity of water pumped per 24 hours for the month of September, 1958, was 3,857,000 and for the quarter 3,736,000 gallons.

No. 2 SHAFT.—The man hoist was commissioned with permanent cages. Development of the main ore and waste passes to the 17th level was completed. These are now being equipped. Excavation and lining of the 1,000 ton waste bin has commenced. Development on the 21st and 25th levels and on the main pump chamber horizon is progressing satisfactorily. The main fan on the 17th level was commissioned. The shaft is hoisting in excess of 1,000 tons of waste daily and hoisting of reef will commence shortly.

No. 2 SHAFT NATIVE HOSTEL.—Permanent accommodation for 1,568 natives was completed at No. 2 Shaft and further building continues.

URANIUM PRODUCTION.—In the Report of the Directors for the year ended 30th June, 1958, it is stated that of the total figure of 6,200 tons of U308 to be sold by the Industry to the Combined Development Agency annually from 1st July, 1958, the Company had been allotted an annual quota of 248 tons. In order to provide an increase in the quantity of U308 originally allocated to one of the producers operating on a small scale, the quotas allocated to the other producers have been scaled down on a pro rata basis, and this Company's participation for the six months 1st July to 31st December, 1958, has now been fixed at 246,390 lb.

DEVELOPMENT.—No. 2 Shaft Area 7,087 feet. Remainder of Mine 6,699 feet. Total 13,786 feet.

PAYABLE DISCLOSURES

Reef	Footage Sampled	Feet	%	PAYABLE DISCLOSURES		
				Gold, Channel Value, Dwt. per ton	Uranium Oxide, Channel Value, Lb./ton	
No. 2 Shaft Area—Basal Reef ..	730	715	97.9	28.1	24	2.073
Remainder of Mine—Basal Reef ..	1,365	1,305	95.6	21.8	21	1.438
Totals and Averages ..	2,095	2,020	96.4	24.3	22	1.687

CITY DEEP, LIMITED

Ore Milled 347,000 tons.	Yield 71,460 oz. fine.	Yield per ton 4.119 dwt.
		Per Ton Milled
		s. d.
Working Revenue	£895,019 51 7	
Working Expenditure	856,180 49 4	
WORKING PROFIT	£38,839 2 3	

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £8,792, and Sundry Revenue £8,200, the Total Profit was £55,831.

Taxation £3,100.

Capital Expenditure £2,600.

DEVELOPMENT totalled 5,817 feet.

PAYABLE DISCLOSURES

Reef	Footage Sampled	Feet	Cent	PAYABLE DISCLOSURES		
				Per Value, Dwt.	Channel Width, Inches	
South Reef	1,000	200	20.0	7.3	43	
Main Reef Leader ..	1,610	1,100	68.3	10.7	31	
Main Reef	410	130	31.7	10.6	30	
Totals and Averages ..	3,020	1,430	47.4	9.9	33	

EAST RAND PROPRIETARY MINES, LIMITED

Ore Milled 695,000 tons. Yield 172,088 oz. fine. Yield per ton 4.952 dwt.

		Per Ton Milled	s. d.
Working Revenue	£2,155,905	62	0
Working Expenditure	1,717,956	49	5
WORKING PROFIT	£437,949	12	7

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £18,498, and sundry revenue £20,200, the Total Profit was £476,647.

Taxation £111,000.

Capital Expenditure, on Shaft Sinking and Equipment, etc. (Net) £128,000. Property (Dr.) £500.

DEVELOPMENT totalled 13,348 feet.

PAYABLE DISCLOSURES

Reef	Footage Sampled	Feet	%	Channel Value Dwt.	Channel Width Inches
South Reef	630	170	27.0	9.7	27
Main Reef Leader	190	20	10.5	10.3	38
Composite Reef	550	340	61.8	10.9	35
Main Reef	790	380	48.1	8.4	46
Totals and Averages	2,160	910	42.1	9.5	38

The Far East Sub-Vertical Shaft has encountered badly broken water-bearing ground and sinking has been delayed due to the necessity to seal off the water by cementation.

DURBAN ROODEPOORT DEEP, LIMITED

Ore Milled 563,000 tons. Yield 101,860 oz. fine. Yield per ton 3.618 dwt.

		Per Ton Milled	s. d.
Working Revenue	£1,276,474	45	4
Working Expenditure	1,117,592	39	8
WORKING PROFIT	£158,882	5	8

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £11,134 and sundry revenue £11,400, the Total Profit was £181,416.

Taxation £30,000.

Capital Expenditure on shaft sinking and equipment, etc. (net) £43,100.

DEVELOPMENT totalled 20,939 feet.

PAYABLE DISCLOSURES

Reef	Footage Sampled	Feet	%	Channel Value Dwt.	Channel Width Inches
Kimberley Reef	7,090	4,370	61.6	5.9	47
South Reef	30	10	33.3	201.3	4
Main Reef Leader	20	—	—	—	—
Main Reef	4,040	1,670	41.3	9.5	43
Totals and Averages	11,180	6,050	54.1	6.8	46

No. 5A Shaft was sunk 294 feet to a total depth of 3,549 feet.

CONSOLIDATED MAIN REEF MINES AND ESTATE, LIMITED

Ore Milled 395,000 tons. Yield 61,940 oz. fine. Yield per ton 3.136 dwt.

		Per Ton Milled	s. d.
Working Revenue	£775,899	39	4
Working Expenditure	735,175	37	3
WORKING PROFIT	£40,724	2	1

Adjusting for additional revenue received during the quarter in respect of gold sold for the period February/July, 1958, £7,128 and sundry revenue £6,500, the Total Profit was £54,352.

Taxation £2,300.

DEVELOPMENT totalled 5,936 feet.

PAYABLE DISCLOSURES

Reef	Footage Sampled	Feet	%	Channel Value Dwt.	Channel Width Inches
Kimberley Reef	570	160	28.1	3.6	49
Bird Reef	520	120	23.1	5.5	62
South Reef	650	190	29.2	49.5	8
Main Reef Leader	1,870	390	20.9	64.5	6
Main Reef	410	20	4.9	5.2	39
Totals and Averages	4,020	880	21.9	14.8	23

WITWATERSRAND NIGEL LIMITED

(Incorporated in the Union of South Africa)

REPORT OF THE DIRECTORS

For the Quarter ended 30th September, 1958

PRODUCTION

Tons Milled	54,300	
Yield (in oz. fine)	13,052	
Yield per Ton Milled (dwts.)	4.807	
		Per Ton Milled s. d.
Working Revenue	£163,252	60 1
Working Costs	144,799	*53 4
Working Profit	18,453	6 9
Add: Sundry Revenue	1,485	
NET PROFIT	£19,938	

(*22ls. 11d. per oz. fine)

Additional revenue received during the Quarter in respect of gold sold to the Reserve Bank for the period February to July, 1958, amounted to £1,403.

CAPITAL EXPENDITURE

The Capital Expenditure for the Quarter amounted to £1,886.

DEVELOPMENT

Development Footage	5,017 feet
Footage on Reef	4,174 feet
Footage Sampled	4,030 feet

The payable reef disclosures were as follows:—

1,055 feet, or 26.2%, averaging 11.96 dwts. per ton over a width of 22.32 inches, equivalent to 267 inch-dwts.

(No allowance has been made in the above results for adjustments necessary before calculation of the corresponding Ore Reserve.)

By Order of the Board,
J. F. INCE, London Secretary.

London Office: Finsbury Pavement House,
120, Moorgate, London, E.C.2.
16th October, 1958.

SPAARWATER GOLD MINING CO., LTD.

(Incorporated in the Union of South Africa)

REPORT OF THE DIRECTORS

For the Quarter ended 30th September, 1958

Tons Milled	32,100	
Total Yield in ounces fine	9,899	
Total Yield per ton (dwt.)	6.168	
		Per Ton Milled s. d.
Working Revenue	123,971	77 3
Cost of Mining and Milling	100,562	63 8
Excess of Revenue over Cost of Mining and Milling	23,409	14 7
Expenditure on Development	21,050	13 1
Working Profit	2,359	1 6

NOTE.—Working Revenue does not include an amount of £1,059 received during the quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Expenditure on Capital Account

Government Taxes

DEVELOPMENT

The total footage advanced during the quarter amounted to 3,253 feet. The footage sampled amounted to 2,665 feet, of which 610 feet, equal to 22.9 per cent, proved payable at an average value of 7.6 dwt. per ton over an estimated stopping width of 36.0 inches, equivalent to 274 inch-dwt.

WESTERN SECTION OF MINE

Development in the Western Section of the mine continued during the quarter. The footage sampled amounted to 1,750 feet, of which 350 feet, equal to 20.0 per cent, proved payable at an average value of 8.3 dwt. per ton over an estimated stopping width of 36.0 inches, equivalent to 299 inch-dwt.

43 Int. W. 15 Haulage was advanced 467 feet towards the Western Boundary of the mine. Due to the steeper dip of the reef all this footage was in hangingwall country. Diamond drilling to the reef horizon disclosed no payable values.

Development returns show the actual sampling results; adjustments which may be required when estimating ore reserves have not been applied.

By Order of the Board,

J. F. INCE, London Secretary.

London Office: Finsbury Pavement House,
120, Moorgate, London, E.C.2.
20th October, 1958.

ANGLO-TRANSVAAL CONSOLIDATED INVESTMENT CO. LIMITED

(Incorporated in the Union of South Africa)

Operating Statistics and Vital Information extracted from the Directors' Reports for Mining Companies associated with the Group for the quarter ended 30th September, 1958.

HARTEBEESTFONTEIN GOLD MINING COMPANY, LIMITED.

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
PRODUCTION				
Gold : Tons milled	261,000		256,000	
Yield—ounces fine	142,680		140,365	
—dwt. per ton milled	10.933		10.966	
Uranium : Tons treated				
From current stimes	261,000		256,000	
From surface accumulations	63,000		77,000	
Total	324,000		333,000	
Yield—lb. of uranium oxide	269,283		292,485	
—lb. per ton treated	0.831		0.878	
FINANCIAL INFORMATION				
Revenue from gold	£1,786,516	136s. 11d.	£1,752,885	136s. 11d.
Working costs	£854,775	65s. 6d.	£847,963	66s. 3d.
Working profit	£931,741	71s. 5d.	£904,922	70s. 8d.
Sundry mining revenue	£12,500	11d.	£45,076	3s. 6d.
Total working profit from gold production	£944,241	72s. 4d.	£949,998	74s. 2d.
Estimated profit from uranium production	£801,606		£867,023	
Total Working Profit for Quarter	£1,745,847		£1,817,021	

Working costs (gold only) per ounce fine

Development expenditure per ton milled included in working costs

NOTE: Uranium output and profit are subject to adjustment.

The following amounts have not been taken into consideration in calculating the working profit shown above :

(a) Additional revenue received from gold sales to the Reserve Bank for the period February/July, 1958

(b) Loans obtained for gold production—Interest

Loan repayment

(c) Loans obtained for uranium production—Interest

Loan repayment

CAPITAL EXPENDITURE

Gold production (including £87,988 on excess development)

Uranium plant

Total

Taxation and Government's share of profits for the quarter ended 30th September, 1958

DEVELOPMENT

Footage advanced

Sampling results of developments on Vaal Reef at No. 1 Shaft :

	Total	Payable	Total	Payable
Footage sampled	9,420	8,955	9,350	8,850
		(95.1%)		(94.6%)

Channel width (inches)

Inch-dwt. (gold)

Inch-lb. (uranium oxide)

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

SHAFT SINKING AND EQUIPPING

No. 2 Vertical Shaft:

Additional settlers on the Transfer level have been completed.

No. 2A Sub-vertical Shaft:

Footage sunk

Depth below collar

Concrete lining accomplished

Depth of concrete lining below collar

Main stations were excavated at foot-wall depths of 3,030 feet and 3,180 feet, respectively, below the shaft collar.

The Vaal Reef was intersected at a depth of 3,163 feet below the collar, equivalent to 6,256 feet below surface. The reef, which was exposed on the elevation of 28 station dips at 4 degrees to the West. The reef was sampled at 5 feet intervals and 19 sections gave an average value of 5.65 dwt. gold per ton and 0.521 lb. of uranium oxide per ton over a channel width of 34.5 inches equivalent to 195 inch-dwt. and 17.98 inch-lb. respectively.

No. 3 Vertical Shaft:

Footage sunk

Depth below collar

Concrete lining accomplished

Depth of concrete lining below collar

A water service dam and a main station were excavated at footwall depths of 4,985 feet and 5,185 feet respectively, below the collar.

GENERAL

Uranium Oxide Production :

Arising out of discussions between the Combined Development Agency and the Atomic Energy Board, your Company has been allocated a quota of 521,590 lb. for the six months ending 31st December, 1958.

HARTEBEESTFONTEIN GOLD MINING COMPANY, LIMITED Continued

Mine Buildings and Plant :
Construction of the 114 million gallon reservoir on the north-west side of the uranium plant is in progress.
The new change house and offices at No. 2 Shaft have been completed.
Work on the new main office block, on extensions to the reduction plant and on a new assay office is in progress.

RAND LEASES (VOGELSTRIJSFONTEIN) GOLD MINING COMPANY, LIMITED.

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
PRODUCTION				
Tons milled	535,000		516,000	
Yield—ounces fine	78,193		76,245	
—dwt. per ton milled	2.923		2.955	
FINANCIAL INFORMATION				
Revenue from gold	£978,394	36s. 7d.	£950,720	36s. 10d.
Working costs	£955,413	35s. 9d.	£949,913	36s. 9d.
Working profit	£22,981	10d.	£807	1d.
Sundry mining revenue	£6,000	3d.	£15,800	7d.
Total Working Profit for Quarter	£28,981	1s. 1d.	£16,607	8d.

Working costs per ounce fine

Development expenditure per ton milled included in working costs

The following amount has not been taken into consideration in calculating the working profit shown above :

Additional revenue received from gold sales to the Reserve Bank for the period February/July, 1958

Capital Expenditure

Estimated Taxation and Government's share of profits for the quarter ended 30th Sept., 1958

DEVELOPMENT

Footage advanced

Sampling results obtained :

	Total	Payable	Total	Payable
Main Reef				
Footage sampled	1,120	260	1,835	880
		(23%)		(48%)

Channel width (inches)

Inch-dwt.

Main Reef Leader

Footage sampled

Channel width (inches)

Inch-dwt.

South Reef

Footage sampled

Channel width (inches)

Inch-dwt.

Total—Main Reef Series

Footage sampled

Channel width (inches)

Inch-dwt.

Bird Reef

Footage sampled

Channel width (inches)

Inch-dwt.

Kimberley Reef

Footage sampled

Channel width (inches)

Inch-dwt.

Total—All Reefs

Footage sampled

Channel width (inches)

Inch-dwt.

(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding Ore Reserve.)

MERRIESPRUIT (ORANGE FREE STATE) GOLD MINING COMPANY, LIMITED.

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
FINANCIAL INFORMATION				
Capital Expenditure (including £4,848 on uranium plant)	£83,854		£82,387	
DEVELOPMENT				
The following were the footages advanced in the 28th level haulages being driven by the Virginia mine in the Merriespruit property :				
28th level haulage	1,776 feet		813 feet	
Companion haulage	1,493 feet		1,008 feet	
Connecting crosscuts	297 feet		—	
Excavations (cubic feet)	28,590		11,170	

Progress was retarded by the intersection of water-bearing fissures requiring cementation.

The haulage and its companion advanced to 1,979 feet, and 1,697 feet, respectively, inside the Merriespruit property.

During the quarter the water level in No. 2 Shaft fell by 89.5 feet, to 1,216 feet below the collar.

GENERAL

Uranium Oxide Production

Arising out of discussions between the Combined Development Agency and the Atomic Energy Board, a quota of approximately 104,000 lb. per annum will be allocated to your Company when it resumes production.

VIRGINIA O.F.S. GOLD MINING CO. LTD.

		Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
PRODUCTION					
Gold :	Tons milled	325,000		303,000	
	Yield—ounces fine	84,945		79,607	
	—dwt. per ton milled	5.227		5.255	
Uranium :	Tons treated	325,000		303,000	
	Yield—lb. of uranium oxide	166,775		155,826	
	—lb. per ton treated	0.513		0.514	
FINANCIAL INFORMATION					
Revenue from gold	£1,063,810	65s. 6d.	£993,047	65s. 7d.	
Working costs	£940,395	57s. 11d.	£878,365	58s. 0d.	
Working profit	£123,415	7s. 7d.	£114,682	7s. 7d.	
Sundry mining revenue	£15,000	11d.	£10,000	8d.	
Total working profit from gold production	£138,415	8s. 6d.	£124,682	8s. 3d.	
Estimated profit from uranium production	£465,654		£454,949		
Estimated profit from acid production	£93,043		£86,796		
Total Working Profit for Quarter	£697,112		£666,427		
Working costs (gold only) per ounce fine		221s. 5d.		220s. 8d.	
Development expenditure per ton milled included in working costs		8s. 2d.		7s. 11d.	
Note: Uranium output and profit are subject to adjustment.					
The following amounts have not been taken into consideration in calculating the working profit shown above :					
(a)	Additional revenue received from gold sales to the Reserve Bank for the period February/July, 1958	£8,474		Nil	
(b)	Debenture and Loan Stocks, Housing and other Loans—Interest	£64,997		£69,219	
(c)	Loans obtained for Acid and Uranium production—Interest	£54,150		£55,765	
	—Loan repayment	£165,569		£163,954	
Capital Expenditure :					
	Gold production (including £102,197 on excess development)	£258,838		£272,903	
	Uranium and Acid plants	£36,841		£44,562	
Total		£295,679		£317,465	
Taxation and Government's share of profits for the nine months ended 30th September, 1958					
Nil					
DEVELOPMENT					
	Footage advanced	20,859		19,679	
This includes the following development advanced in the Merriespruit property in terms of the agreement entered into with Merriespruit (Orange Free State) Gold Mining Company, Limited :					
	28th level haulage	1,776 feet		813 feet	
	Companion haulage	1,493 feet		1,008 feet	
	Connecting crosscuts	297 feet		—	
	Excavations (cubic feet)	28,590		11,170	
Sampling results of development on Basal and Leader Reefs at No. 1 Shaft :					
	Footage sampled	Total 9,705	Payable 3,155 (32.5%)	Total 8,335	Payable 3,625 (43.5%)
	Channel width (inches)	29.3	28.7	32.5	32.6
	Inch-dwt. (gold)	163	306	191	329
	Inch-lb. (uranium oxide)	12.96	22.80	14.02	23.83
(The above results are based on actual sampling. No allowance has been made for adjustments necessary in the valuation of the corresponding ore reserve.)					
SHAFT SINKING AND EQUIPPING					
No. 2 Shaft :					
Installation of the headgear steelwork was completed and hoisting of rock at this shaft has commenced.					
GENERAL					
Uranium Oxide Production :					
Arising out of discussions between the Combined Development Agency and the Atomic Energy Board your Company has been allocated a quota of 324,880 lb. for the six months ending 31st December, 1958.					

MIDDLE WITWATERSRAND (WESTERN AREAS) LIMITED.

The following relates to this company's subsidiary

NEW KLERKSDORP GOLD ESTATES, LIMITED

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
		Per ton milled		Per ton milled
Results for the Quarter :				
Net loss from gold production	£23,126	14s. 11d.	£24,053	15s. 7d.
Estimated profit from uranium production (subject to adjustment)	34,500		34,500	
Total Working Profit for Quarter	£11,374		£10,447	

The following amounts have not been taken into consideration in calculating the working profits shown above :

Loans obtained for uranium production—Interest	£ 507	£ 523
Loan Repayment	1,745	1,727
Estimated taxation for the nine months ended 30th September, 1958	— £275.	

Arising out of discussions between the Combined Development Agency and the Atomic Energy Board, the Stilfontein Joint Uranium Production Scheme has been allocated a quota for the six months ending 31st December, 1958, of which this Company's proportion is 42,720 lb.

EASTERN TRANSVAAL CONSOLIDATED MINES, LIMITED.

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
PRODUCTION		
Tons milled	55,900	55,700
Yield—ounces fine	19,104	19,560
—dwt. per ton milled	6.835	7.023
FINANCIAL INFORMATION		
Revenue from gold	£239,046	£243,697
Working costs	£186,409	£194,685
Working profit	£52,637	£49,012
Sundry mining revenue	£4,482	£7,162
Total Working Profit for Quarter	£57,119	£56,174

The following amount has not been taken into consideration in calculating the working profit shown above :

Additional revenue received from gold sales to the Reserve Bank for the period February/July, 1958	£2,065	Nil
Capital Expenditure	£19,629	£24,593
DEVELOPMENT		
Footage advanced	9,500	9,003

SHAFT SINKING AND EQUIPPING

Agnes Gold Mine : Cessa sub-vertical shaft :		
Footage sunk	45 feet	131 feet
Depth below 17 level	1,041 feet	996 feet

Excavation of 24 level station was completed.

GENERAL
X-ray equipment, to comply with the requirements of the Pneumoconiosis Act, has been installed in the Native hospital at the New Consort Mine. This X-ray unit will serve all the mines of the company.

RIEBECK GOLD MINING COMPANY, LTD.

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
FINANCIAL INFORMATION				
Capital Expenditure	£273,860		£299,488	
The total capital expenditure incurred to 30th September, 1958, including preliminary expenses and the acquisition of mineral and surface rights amounted to £2,986,797.				
DEVELOPMENT				
Exploratory work in the northern portion of the lease area has disclosed promising values. Development towards reef in this area has commenced.				
SHAFT SINKING AND EQUIPPING				
No. 1 Shaft :				
Footage sunk	959 feet		765 feet	
Depth below collar	2,195 feet		1,236 feet	
Concrete lining accomplished	960 feet		765 feet	
Depth of concrete lining below collar	2,145 feet		1,185 feet	
Installation of electrical and pumping equipment in the pump station at 930 feet below the collar has been completed.				
A second pump station was excavated at a depth of 1,860 feet below the collar and installation of equipment is in progress.				
MINE BUILDINGS AND PLANT				
Work on the Native Police Barracks has been completed.				
An area for the disposal of underground water by evaporation has been established, a pump house erected and installation of electrical and pumping equipment completed. Construction of a pipe-line to the water disposal area is in progress.				
PROPOSED MERGER WITH LORAINÉ GOLD MINES, LIMITED				
The proposals for the merger of this company with Lorainé Gold Mines, Limited, were approved by shareholders at extraordinary general meetings of both companies held on 25th September, 1958. Application will be made on 21st October, 1958, to the Supreme Court of South Africa (Witwatersrand Local Division) for an Order of Court sanctioning the scheme of arrangement. A further circular will be despatched to shareholders in due course.				

VILLAGE MAIN REEF GOLD MINING COMPANY (1934) LIMITED.

	Quarter ended 30th September, 1958		Quarter ended 30th June, 1958	
PRODUCTION				
Tons milled	82,500		89,000	
Yield—ounces fine	13,871		13,989	
—dwt. per ton milled	3.363		3.143	
FINANCIAL INFORMATION				
Revenue from gold	£173,704	42s. 1d.	£174,652	39s. 3d.
Working costs	£174,857	42s. 4d.	£175,495	39s. 5d.
Working loss	£1,153	3d.	£843.	2d.
Sundry mining revenue	£650	2d.	£3,462	9d.
Net Working Loss for Quarter	£503	1d.	*£2,619	7d.
*Working Profit				
Working costs per ounce fine	252s. 1d.		250s. 11d.	
Development expenditure per ton milled included in working costs		6d.		8d.
The following amount has not been taken into consideration in calculating the working loss shown above :				
Additional revenue received from gold sales to the Reserve Bank for the period February/July, 1958	£1,542		Nil	
Capital Expenditure	Nil		Nil	
Estimated Taxation for the quarter ended 30th September, 1958	Nil		Nil	
DEVELOPMENT				
Footage advanced	800		511	
Reconditioning footage	4,457		10,136	
GENERAL				
During September operations were adversely affected by an extensive fall of ground which occurred in a main haulage underground.				

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(Incorporated in the Union of South Africa)

GOLD MINING COMPANIES' DIRECTORS' REPORTS FOR THE QUARTER ENDED 30th SEPTEMBER, 1958

All companies mentioned are incorporated in the Union of South Africa

WEST RAND CONSOLIDATED MINES, LTD.

WORKING RESULTS			
	Gold Section	Uranium Section	Total
Ore Milled (tons)	391,000	228,000	619,000
Uranium Output (lbs.)	—	314,917	314,917
Uranium Yield (ounces per ton)	—	22.099	—
Uranium Yield (lbs. per ton)	—	1.381	—
Gold produced (ounces fine)	56,697	6,542	63,239
Gold produced—recovery per ton (dwt.)	2.900	0.574	2.043
WORKING REVENUE AND EXPENDITURE			
	£	£	£
Net Profit from Uranium, being Gross Revenue less recovery costs (subject to adjustment) ..	—	1,013,000	1,013,000
Revenue from Gold	708,159	81,707	789,866
TOTAL WORKING REVENUE	708,159	1,094,707	1,802,866
Working Costs (excluding items deducted from Uranium Revenue)	688,694	452,673	1,141,367
WORKING PROFIT	19,465	642,034	661,499
Mine Sundry Revenue	31,556	340	31,896
TOTAL PROFIT AT MINE	51,021	642,374	693,395
Additional Revenue	—	—	18,389
TOTAL PROFIT (Subject to Taxation)	—	—	£711,784
CAPITAL EXPENDITURE			
	s. d.	s. d.	s. d.
Working Revenue per ton milled	36 3	96 0	58 3
Working Costs per ton milled	35 3	39 8	36 11
Working Profit per ton milled	1 0	56 4	21 4
Additional revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February, 1958 to July, 1958 ..	—	—	£6,956
Provision for Taxation (including adjustments for previous Quarters)	—	—	£320,000
CAPITAL EXPENDITURE	—	—	£1,673
(a) Normal (excluding Uranium Plant)	—	—	717
(b) Uranium Plant	—	—	—
TOTAL	—	—	£2,390

Nineteenth quarterly instalment towards repayment of Uranium Loan Funds (made up of Capital £60,922 and Interest £14,450) £74,472. (Balance of Loan Outstanding at 30th September, 1958, £1,406,486.)

FIRE AT MINE—The amount to be recovered from the Insurance Companies arising from the loss sustained as the result of the fire which destroyed the Extractor House at the North Reduction Plant and which was referred to in the Directors' Report for the quarter ended 31st March, 1958, has been agreed upon at £62,678.

URANIUM QUOTA—Advice has been received from the Atomic Energy Board that by arrangement between the Board and the Combined Development Agency the overall production of uranium oxide on the latter's account is to be limited to 3,100 tons for the six months ending 31st December, 1958, and of which this Company's quota is 622,930 lbs. Under certain circumstances the Company's quota for subsequent periods is subject to annual review, but it is not anticipated that any material alterations will arise during the remaining period of the contract which expires on 31st December, 1964.

DEVELOPMENT—The total footage advanced during the quarter was 25,657 feet, of which 12,689 feet were accomplished on the Main, Livingstone and Kimberley Reefs Series and 12,968 feet on the Bird Reef Series, giving the following results:—

GOLD SECTION—Main, Livingstone and Kimberley Reefs Series						
Reef	Footage Payable	Percentage Payable	Reef Channel width—in.	Av. value dwt.	In./dwt.	
Main Reef	1,580	74.2	41.4	7.8	32.4	
South Reef	700	76.1	27.0	9.8	26.5	
Livingstone Reef	670	71.3	59.3	7.9	47.1	
Kimberley Reef	—	—	—	—	—	
TOTALS	2,950	73.9	42.0	8.2	34.4	

URANIUM SECTION—Bird Reef Series									
Reef	Footage Payable	Percentage Payable	Width/Inches	Value dwt.	Inch/oz.	Value lb.	Inch/oz.		
White Reef	70	93.3	6.2	15.0	93	77.3	4.831	480	
Monarch Reef	2,570	85.1	9.5	5.7	54	128.9	8.056	1,225	
Upper Monarch Reef	2,485	83.5	28.7	0.9	27	36.0	2.250	1,036	
Upper Monarch Reef —Zone 2	790	92.4	31.6	1.4	45	37.6	2.350	1,190	
Other Reefs	155	45.6	17.1	0.7	13	28.5	1.781	489	
TOTALS	6,070	83.6	20.4	2.0	41	54.6	3.412	1,115	

* The percentage payable is determined on a combined Uranium/Gold content. The above values represent actual results of sampling, no allowance having been made for any reductions which, subsequently, may be considered necessary when compiling the Ore Reserve.

ELLATON GOLD MINING CO. LTD.

GOLD:			
Ore milled (tons) ..	96,000	Gold recovered (oz.) ..	22,400
Yield per ton (dwt.) ..	4.667	Per ton milled ..	250/5.4
Working Revenue	£280,503	Per oz. fine ..	162/10.3
Working Cost	182,399		
WORKING PROFIT	98,104	20/5.3	87/7.1
Additional Revenue in respect of gold sold to the Reserve Bank for the period January to September, 1958, amounted to £2,368.			
URANIUM:			
Tons treated	92,494		
Output (lb.)	25,850.5		
Yield per ton (lb.)	0.2795		
Working Profit (subject to adjustment and after deduction of amounts paid in respect of the use of the Stilfontein Plant)	44,000		
TOTAL WORKING PROFIT	£142,104		

URANIUM QUOTA—Advice has been received from the Atomic Energy Board that by arrangement between the Board and the Combined Development Agency, the overall production of uranium oxide on the latter's account is to be limited to 3,100 tons for the six months ending 31st December, 1958. The quota for this period allocated to the Stilfontein Joint Plant is 413,780 lbs. of which this Company's share is 61,600 lbs.

Under certain circumstances, the Joint Plant quota for the remainder of the contract period which expires on 31st December, 1964 is subject to annual review.

CAPITAL EXPENDITURE (excluding Uranium Plant) ..		£	£
RECOUPMENT DURING THE QUARTER			471
LOAN REPAYMENTS (Capital and Interest):			
Uranium	16,112		
Other	198,084		
			214,196
			£213,725

Capital Expenditure on the Uranium Plant

Amortisation contributions received from other participants in the Uranium Joint Pumping Scheme

DEVELOPMENT—The total footage advanced during the quarter was 1,910 feet. Of this total 1,006 feet were on reef and 1,010 feet were sampled, giving the following results:—

	Footage Payable in terms of Gold content	Per Cent	Reef Channel Width	Gold Av. value dwt./in.	Uranium Av. value lb./in.
Vaal Reef	765	75.7	26.3	17.9	471 1.253 32.96

SOUTH ROODEPOORT MAIN REEF AREAS LTD.

WORKING RESULTS			
Ore milled (tons) ..	90,000	Gold produced (oz. fine) ..	21,255
Recovery per ton (dwt.) ..	4.723		
WORKING REVENUE AND EXPENDITURE			
	£	Per ton milled	Per oz. fine
Working Revenue	265,486	59 0	249 10
Working Costs	194,909	43 4	183 5
WORKING PROFIT	70,577	15 8	66 5
Mine Sundry Revenue	2,690		
TOTAL PROFIT AT MINE	73,267		
Additional Revenue	2,171		
TOTAL PROFIT (subject to Taxation)	£75,438		

Additional revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February, 1958, to July, 1958—£2,191.

Provision for Taxation	£30,700
Capital Expenditure	£1,639

DEVELOPMENT:

Total Footage	Footage Sampled	Percentage Payable	Value dwt./ton	Width in.	Inch/dwt.
7,565	4,415	910	20.6	13.5	22 297

The above values represent actual results of sampling, no allowance having been made for any reductions which, subsequently, may be considered necessary when compiling the Ore Reserve.

STILFONTEIN GOLD MINING CO. LTD.

GOLD:				
Ore milled (tons) ..	345,000	Gold recovered (oz.) ..	180,789	
	Yield per ton (dwt.) ..	9.906		
	£		Per ton	Per oz.
Working Revenue	2,264,732	124/1.1	250/6.5	
Working Cost	1,051,726	57/7.5	116/4.2	
WORKING PROFIT	1,213,006	66/5.6	134/2.3	
URANIUM:				
Tons treated		275,000		
Output (lb.)		85,950		
Yield per ton (lb.)			0.3125	
Working Profit (subject to adjustment)	226,000			
ACID:				
Working Profit	49,000			
	£1,488,006			

Additional revenue in respect of gold sold to the Reserve Bank for the period February to September, 1958, amounted to £16,595.

URANIUM QUOTA: Advice has been received from the Atomic Energy Board that by arrangement between the Board and the Combined Development Agency, the overall production of uranium oxide on the latter's account is to be limited to 3,100 tons for the six months ending 31st December, 1958. The quota for this period allocated to the Stilfontein Joint Plant is 413,780 lb. of which this Company's share is 171,880 lbs.

Under certain circumstances the Joint Plant quota for the remainder of the contract period which expires on 31st December, 1964, is subject to annual review.

CAPITAL EXPENDITURE (excluding Uranium and Acid Plants)	£906,757
LOAN REPAYMENTS (Capital and Interest):	
Uranium	127,255
Acid	33,501
Other	4,875
	165,631
	£1,072,388

Capital Expenditure on the Uranium and Acid Plants	£12,343
Amortisation contributions received from other participants in the Uranium Joint Production Scheme	£62,245
DEVELOPMENT: The total footage advanced for the Quarter was 18,505 feet. Of this total 2,940 feet were on reef and 3,355 feet were sampled, giving the following results:	

Footage Payable in terms of Gold Content	Per Cent	Reef Channel Width (in.)	Gold dwt. (in.)	Av. value ton dwt. lb.	Uranium Av. value lb./in.
Vaal Reef	2.595	77.3	4.4	122.3	538
					2,652
					11.67

SHAFT SINKING:—The Margaret Shaft was sunk a further 160 feet to its final depth of 4,444 feet.

REDUCTION PLANT:—The work on extensions to the Reduction Plant to a nominal capacity of 160,000 tons per month has been completed and the expanded Plant was commissioned during July.

KOEPE WINDER:—The installation of the winder is proceeding satisfactorily. **TONG SHAF:**—The shaft was excavated to a depth of 35 feet and work on the collar is in progress. Foundations for the 3,000 H.P. double drum winder, a 600 H.P. double drum Service Winder and a Stage Hoist were completed.

Water, compressed air and electric power services have been laid on to the Site. Work on the Compound was started.

REEF PICKING PLANT:—The Reef Picking Plant was commissioned in August. The improved waste elimination has resulted in a higher figure of cost per ton milled which has been offset by the improved recovery grade.

BUFFELSFONTEIN GOLD MINING CO. LTD.

GOLD:				
Ore milled (tons) ..	355,000	Gold recovered (oz.) ..	119,616	
	Yield per ton (dwt.) ..	6.739		
	£		Per ton	Per oz.
Working Revenue	1,497,746	84/4.6	250/5.1	
Working Cost	945,746	53/5.4	158/1.6	
WORKING PROFIT	552,000	31/1.2	92/3.5	
URANIUM:				
Tons treated from Current Slimes		355,000		
Tons treated from Surface Accumulations		103,000		
Total Tons Treated		458,000		
Output (lb.)		191,750		
Yield per ton (lbs.)			0.4187	
WORKING PROFIT (subject to adjustment) ..	520,000			
ACID:				
WORKING PROFIT	51,000			
TOTAL WORKING PROFIT	£1,123,000			

Additional revenue in respect of gold sold to the Reserve Bank for the period February to September, 1958, amounted to £11,533.

URANIUM QUOTA: Advice has been received from the Atomic Energy Board that by arrangement between the Board and the Combined Development Agency the overall production of uranium oxide on the latter's account is to be limited to 3,100 tons for the six months ending 31st December, 1958, and of which this Company's quota is 383,500 lbs.

Under certain circumstances the Company's quota for the remainder of the contract period which expires on 30th June, 1967, is subject to annual review, but it has been agreed that in any reallocation of quotas which may become necessary, the Company will receive priority to the extent of an increase not exceeding 86,000 lbs. per annum.

CAPITAL EXPENDITURE (excluding Uranium, Pyrite and Acid Plants)	£286,191
LOAN REPAYMENTS (Capital and Interest):	
Uranium	£119,687
Acid	81,172
Other	250,000
	450,859
	£737,050

Capital Expenditure on the Uranium, Pyrite and Acid Plants, £148,521.

DEVELOPMENT:—The total footage advanced during the quarter was 28,670 feet. Of this total 8,106 feet were on reef and 8,005 feet were sampled, giving the following results:—

Footage Payable in terms of Gold Content	Per Cent	Reef Channel Width (in.)	Gold dwt. (in.)	Av. value ton dwt. lb.	Uranium Av. value lb./in.
Vaal Reef	7.930	99.1	43.8	15.7	687
					1,096
					48.00

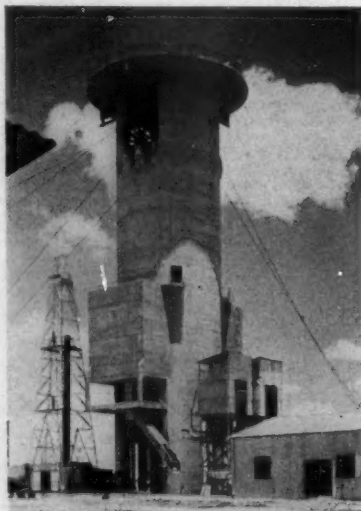
PIONEER VENTILATION SHAFT:—Conversion of the Pioneer Ventilation Shaft to increase the hoisting capacity has been completed and hoisting of rock has commenced.

It will not have escaped notice that almost all of this new trust's portfolio was acquired without recourse to the market. Nowadays, stock is never all that plentiful in the Kaffir market, and heavy trust purchasing on what was already a rising market could well have had unhealthy results. On the evidence to date it may thus be assumed that the trust's future buying policy will be a leisurely one calculated not to disturb the market.

A New Source of Finance

With a dividend distribution of not more than about 1 per cent as a matter of policy, the trust should have an income for re-investment in South African gold and other shares of at least £250,000 per annum, even assuming that the initial success of this operation does not encourage the marketing of additional shares. If this type of trust were to become popular, it could provide the houses with a useful additional source of financing.

Certainly there should be no great difficulty in such buyers acquiring the shares they need at the present stage in the growth of the new and developing mines. Generalizations can be misleading in such a context, but broadly it is characteristic of the group system that between the early stages of a mine's development and the time when it becomes



The 150 ft. high headframe of the No. 1 Shaft at Riebeeck Gold Mine

fully established and has reached a level rate of earnings, the proportion of shares held by the sponsoring group will have been considerably reduced. Thus it would not be unusual to find as much as 20 per cent of the equity being released in this period. This figure will, of course, fluctuate considerably from one mine to another, but it illustrates a cardinal principal of the group system, that it is by realizing on established mines that the finance house accumulates afresh the capital for new ventures.

The Value of the Dollar

In another respect the market performance of A.S.A.I.C. may become of especial interest if it is sufficiently widely held in the States, in that it could become the barometer of the Americans' own current assessment of the strength of the dollar. The trust was launched at a time when there was considerable self-questioning on this matter among businessmen within the States and the issue was well oversubscribed, although it has since remained at a small but persistent discount. It should be noted that this success was achieved despite the coincident and sharply rising note of optimism regarding the outlook of the American economy, which has been noticeable since Labour Day, and which has brought the average yield on Ameri-

(Continued on page 18)

JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY, LIMITED GROUP

MINING COMPANIES' REPORTS FOR THE QUARTER ENDED 30th SEPTEMBER, 1958 WITH COMPARATIVE FIGURES FOR THE PREVIOUS QUARTER.

(All Companies mentioned are incorporated in the Union of South Africa)

GENERAL REMARKS—In determining the payable footage, gold has been taken at 249s. 3d. per ounce fine. The development values are the actual results of the sampling of development work on reef; no allowance has been made for modifications which may be necessary when computing ore reserves.

GOVERNMENT GOLD MINING AREAS (Modderfontein) CONSOLIDATED, LIMITED.

ISSUED CAPITAL	£1,120,000	
(Divided into 5,600,000 shares of 4s. 9d. each, fully paid)		
	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	188,000	187,000
Gold recovered from current milling—ounces fine	31,265	30,812
Recovery per ton—dwts.	3,326	3,295
Gold recovered from old residues—ounces fine ..	3,411	4,999
RESULTS OF OPERATIONS		
Revenue from Gold, Silver and Osmiridium	£433,112	£445,546
Rents and Sundry Revenue	7,287	7,256
Revenue from Sales of Salvaged Equipment	6,257	6,453
	£446,656	£459,255
NOTE : The revenue from gold includes revenue from sales of gold derived from the treatment of old residues.		
Less: Working Costs	445,831	453,639
Profit from Gold Mining, Salvage, Treatment of old residues and Sundry Revenue	£825	£5,616
Add: Revenue from Pyrite, representing the value of the output less plant operating costs, and provision for interest on and repayment of the loans raised for the project	75,107	75,044
OPERATING PROFIT FOR QUARTER	£75,932	£80,660
Less: Estimated Government Share of Profits and Taxation	15,500	15,800
PROFIT AFTER TAXATION	£60,432	£64,860

NOTE: In addition to the revenue for the quarter shown above an amount of £3,895 was received from gold sold to the S.A. Reserve Bank during the period February to July, 1958. (The revenue for the previous period, August, 1957, to January, 1958, amounted to £3,590 and was reflected in the Report for the quarter ended 31st March, 1958.) This additional revenue has been taken into account in arriving at the provision for taxation.

PYRITE LOANS

Quarterly instalment paid in respect of interest on and redemption of loans raised by this Company	£10,350	£10,350
Balance of Pyrite Loans at end of Quarter	£220,244	£228,344

DEVELOPMENT

Total Development—feet	522	835
Sampled—feet	285	660
Payable—feet	60	195
Percentage payable	21	30
Value—dwts.	16.0	10.0
Width—inches	15	28
Inch—dwts.	240	280

FREDDIES CONSOLIDATED MINES, LIMITED.

ISSUED CAPITAL	£16,359,913	
(Divided into 16,359,913 shares of £1 each, fully paid)		
	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold:		
Tons milled	170,000	162,000
Gold—ounces fine	44,344	44,732
Yield per ton—dwts.	5.22	5.52
Cost per ton milled	83s. 8d.	88s. 6d.
Uranium O.F.S. Joint Production Scheme:		
Tonnage Entitlement of this Company	175,175	158,887
Lbs. apportioned	54,055	52,684
Yield per ton on lbs. apportioned309	.332
RESULTS OF OPERATIONS		
Revenue from Gold and Sundry Revenue	£566,067	£569,141
Less: Working Costs	711,142	716,745
LOSS ON GOLD MINING	£145,075	£147,604
Uranium—Estimated Net Revenue from Uranium, subject to future adjustments and representing the revenue less the share of joint pumping, treatment and amortization charges apportioned to this Company from the O.F.S. Joint Production Scheme for the quarter	88,000	96,000
OPERATING LOSS FOR QUARTER	£57,075	£61,604

NOTE: In addition to the revenue for the quarter shown above an amount of £4,692 was received from gold sold to the S.A. Reserve Bank during the period February to July, 1958. (The revenue for the previous period, August, 1957, to January, 1958, amounted to £5,282 and was reflected in the Report for the quarter ended 31st March, 1958.)

FREDDIES CONSOLIDATED MINES, LIMITED *Continued*

INTEREST PAYABLE

Interest on amounts advanced to the Company by the National Finance Corporation of South Africa and certain Building Societies. (Not taken into account when arriving at the loss for the quarter.)	£15,488	£15,399
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CAPITAL EXPENDITURE

On Mining Installations	£12,394	£1,929
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DEVELOPMENT

Total Development—feet	13,426	11,781
Sampled feet	1,855	1,220
Payable—feet	*960	*900
Percentage payable	52	74
Value—dwts.	77.3	62.5
Value—lbs. uranium	5.2	3.8
Width—inches	6	379
Inch—dwts.	444	6
Inch—lbs.—uranium	31.2	22.8

*Payability is based on the combined Gold and Uranium content.

GENERAL REMARKS

Gold recovery per ton milled during recent months has been lower than expected. This, together with the fact that production is still below the capacity of the reduction works, continues adversely to affect revenue. To meet this situation stops have been taken to reduce the present level of expenditure by curtailing exploratory development for the time being.

The value of payable development sampled during the quarter has been unduly enhanced by the high values obtained in one particular development raise. These high values occur in an area of limited tonnage and are unlikely to affect the average overall value of the ore available for stoping.

Uranium Oxide Sales Quota

The Atomic Energy Board has allocated to the O.F.S. Joint Production Scheme in which this Company is an active participant, a sales quota of 581,210 lbs. of uranium oxide for the six months ending 31st December, 1958.

Shares in Free State Geduld Mines Limited:

During the quarter the Company disposed of the remainder, viz.: 23,000, of its holding of shares in Free State Geduld Mines Limited for a net consideration of £103,898.

THE EAST CHAMP D'OR GOLD MINING COMPANY, LIMITED.

ISSUED CAPITAL	£259,875	
(Divided into 2,079,000 shares of 2s. 6d. each, fully paid)		
	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	40,000	37,000
Gold—ounces fine	1,060	985
Yield per ton—dwts.530	.532
Uranium Oxide—lbs.	27,478	29,962
Yield per ton—lb.687	.810
Cost per ton milled	50s. 2d.	51s. 8d.
RESULTS OF OPERATIONS		
Revenue from Gold and Sundry Revenue	£14,237	£13,933
Estimated Net Uranium Revenue subject to future adjustments, and representing the estimated value of output less plant operating costs and provision for interest on and repayment of loans raised for the project	104,200	99,800
Less: Working Costs	£118,437	£113,733
OPERATING PROFIT FOR QUARTER	£18,141	£18,062
Less: Estimated Taxation	5,950	6,250
PROFIT AFTER TAXATION	£12,191	£11,832

NOTE: In addition to the revenue for the quarter shown above, an amount of £102 was received from gold sold to the S.A. Reserve Bank during the period February to July, 1958. (The revenue for the previous period, August, 1957, to January, 1958, amounted to £109 and was reflected in the Report for the quarter ended 31st March, 1958.) This additional revenue has been taken into account in arriving at the provision for taxation.

URANIUM LOANS

Quarterly instalment paid in respect of interest on and redemption of loans raised by this Company	£3,905	£3,905
Balance of Uranium Loans at end of quarter	£86,163	£89,190

DEVELOPMENT

Bird Reef Series		
Development—feet	4,707	3,957
Sampled—feet	3,250	2,535
Payable—feet	*1,015	*865
Percentage payable	31	34
Value—gold—dwts.	3.0	2.1
Value—uranium—lbs.	3.5	2.8
Width—inches	15	18
Inch—dwts.—gold	45	38
Inch—lbs.—uranium	53	50

*Payability is based on the combined Gold and Uranium content.

GENERAL REMARKS

Uranium Oxide Sales Quota

The Atomic Energy Board has allocated to the Joint Production Scheme in which this Company and The Randfontein Estates Gold Mining Company, Witwatersrand, Limited, participate a sales quota of 977,610 lbs. of uranium oxide for the six months ending 31st December, 1958.

THE RANDFONTEIN ESTATES GOLD MINING COMPANY, WITWATERSRAND, LIMITED.

ISSUED CAPITAL £4,063,553
(Divided into 4,063,553 shares of £1 each, fully paid)

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Gold Division		
Tons milled.....	80,000	92,000
Gold—ounces fine.....	11,940	14,121
Yield per ton—dwts.....	2,985	3,070
Cost per ton milled.....	34s. 9d.	35s. 11d.
Revenue from Gold and Sundry Revenue.....	£154,391	£180,177
Less: Working Costs.....	139,064	165,242
PROFIT	£15,327	£14,935
Uranium Division		
Tons milled.....	508,000	476,000
Gold—ounces fine.....	30,587	31,262
Yield per ton—dwts.....	1,204	1,314
Uranium oxide—lbs.....	484,663	473,890
Yield per ton—lb.....	.954	.996
Cost per ton milled.....	77s. 0d.	80s. 1d.
Revenue from Gold and Sundry Revenue.....	£410,371	£417,294
Estimated Net Revenue from Uranium and Acid subject to future adjustments and representing the estimated value of output less plant operating costs and provision for interest on and repayment of loans raised for the project.....	£1,877,000	£1,820,000
	£2,287,371	£2,237,294
Less: Working Costs.....	1,956,624	1,906,517
PROFIT	£330,747	£330,777
RESULTS OF OPERATIONS		
Combined Profit for quarter.....	£346,074	£345,712
Less: Estimated Taxation.....	129,000	127,000
PROFIT AFTER TAXATION	£217,074	£218,712

10 & 11, Austin Friars, London, E.C.2.
15th October, 1958.

NOTE: In addition to the revenue for the quarter shown above an amount of £4,696 was received from gold sold to the S.A. Reserve Bank during the period February to July, 1958. (The revenue for the previous period, August, 1957, to January, 1958, amounted to £5,120 and was reflected in the Report for the quarter ended 31st March, 1958.) This additional revenue has been taken into account in arriving at the provision for taxation.

CAPITAL EXPENDITURE ON GOLD DIVISION	£5,480	£4,888
CAPITAL EXPENDITURE ON URANIUM DIVISION	£22,585	—
URANIUM LOANS		
Quarterly instalment paid in respect of interest on and redemption of loans raised by this Company	£215,086	£215,086
Balance of Uranium Loans at end of quarter.....	£4,611,277	£4,779,271
DEVELOPMENT		
Total Development—feet.....	36,564	33,423
Gold Division		
Development—feet.....	20	657
Sampled—feet.....	—	320
Payable—feet.....	—	105
Percentage payable.....	—	33
Value—dwts.....	—	7.6
Width—ins.....	—	274
Inch-dwts.....	—	—
Uranium Division—Bird Reef Series		
Development—feet.....	36,544	32,766
Sampled—feet.....	6,040	4,200
Payable—feet.....	*2,085	*1,495
Percentage payable.....	35	36
Value—gold—dwts.....	3.9	8.8
Value—uranium—lbs.....	3.1	4.6
Width—ins.....	19	14
Inch-dwts—gold.....	74	123
Inch-lbs.—uranium.....	59	64

* In the case of the Uranium Division payable is based on the combined Gold and Uranium content.

GENERAL REMARKS:

Uranium Oxide Sales Quota:
The Atomic Energy Board has allocated to the Joint Production Scheme in which this Company and The East Rand Gold Mining Company Limited participate a sales quota of 977,610 lbs. of uranium oxide for the six months ending 31st December, 1958.

JOHANNESBURG CONSOLIDATED INVESTMENT COMPANY LIMITED
D. L. REYNOLDS, Secretary.

can industrial ordinaries down to around 3½ per cent.

This is surely carrying the flight from inflation to extremes and it may well be that U.S. investors will soon be tempted to take cover—capital gains tax or no. Thus, the attraction of the newer South African gold mines now must be considerable and the assets valuation of A.S.A.I.C. will doubtless be watched with interest. It is, therefore, to be hoped that New York brokers will now begin to study the Kaffir market more closely, as there has hitherto been a surprising ignorance about this market in New York.

The Political Factor

Having regard in this connection to the views of many Americans on political events in South Africa, it is interesting to observe how little these now appear to influence Kaffir market thinking. The Nationalist government has done nothing to deviate, at least in its expressed intentions, from the racial policies which used to cause such alarm in London and Continental markets only two or three years ago, yet, while government pronouncements continue to earn unfavourable Press comment, the investor has seemingly come to distinguish between events in South Africa of which he may or may not personally approve and events which are significant in relation to share values.

A recent notable example of this has been the election of Dr. Verwoerd as Prime Minister in succession to the late Dr. Strydom. As Minister for Native Affairs Dr. Verwoerd has, of course, been especially identified with *apartheid* and his accession to the leadership of the Nationalist government can scarcely be expected to cause any reversal of this policy. Yet there was a significant lack

of overseas market reaction to this "political factor", which was quite overshadowed by the success of the A.S.A.I.C. offer later in September.

Germany Takes a Hand

Prior to this, equally tangible evidence of confidence in the Union had been forthcoming from another source: namely the West German Republic with whom the Anglo American Corporation successfully negotiated a loan: for £4,250,000 via the Deutsche Bank. The principal purpose in raising this loan was to provide from sources outside the Union the capital required to enable De Beers to acquire a half interest in the Williamson Diamond Mines, South Africa's gold reserves being still at the time in no shape to make avoidable nett exports of capital on this scale.

It is, however, many years since there has been any German interest in South African mining, and the significance of this deal from the point of view of the Kaffir market is that it has provided Anglo American with the opportunity to widen the international market in its ordinary shares (the loan is in the form of bearer bonds convertible into Anglo American ordinary at 170s. 6d. at any time up to September, 1963), and indirectly to reawaken the German interest in Kaffirs generally.

Uranium Earnings at Their Peak

A significant point to be noticed in connection with uranium quotas, now published in detail for the first time, is that virtually all U mines will from now on have to reduce their average rate of output by a slight amount compared with the average for the past year. The extent of this reduction will, in fact, not

be material and, indeed, in the case of the current quarter to December, will probably be no more than the usual seasonal decline. These figures do, however, serve notice that investors cannot look for any further growth in uranium earnings from Combined Agency contracts. Whether any privately negotiated contracts such as that already announced by Harmony will materialize and, if so, at what price level, is yet to be seen.

Brand's Shaft Intersection

This quarter's results from the mines, though satisfactory, contain little to set the market on fire. Indeed, the most important news announced during the period of publication of the reports arose from a borehole drilled after the close of the quarter. This drill, situated half a mile to the east of President Brand's No. 2 shaft, was intended to provide information as to the depth of the reef adjacent to the Arrarat fault, which forms the boundary between the two President mines.

In fact the borehole did much more than this. Two reef intersections were made at 7,240 ft. The first of these produced an incomplete exposure assaying almost 30 dwts. over 36 in., or 1,078 in. dwts., with uranium values of 14.65 in. lb. while a complete exposure in the second gave 3,376 in. dwts. and 40.44 in. lb.

Two significant facts are implied by these figures — although it must be emphasized that a single borehole is never more than an indication of what lies below. Firstly, it appears that the ground near the Arrarat fault may not be as broken as might have been expected. This is deduced from the fact
(Continued on page 20)

UNION CORPORATION, LIMITED.

(Incorporated in the Union of South Africa)

Directors' Reports of Gold Mining Companies Incorporated in the Union of South Africa, for Quarter ended
30th September, 1958.

London Office: Princes House, 95, Gresham Street, London, E.C.2.

MARIEVALE CONSOLIDATED MINES, LTD.

ISSUED CAPITAL £2,250,000 IN SHARES OF 10s. EACH

Tons Milled .. 224,000 Gold Produced (in oz. fine) .. 58,524
Yield per Ton Milled (dwt.) .. 5.23

Working Revenue	£732,725	Per Ton Milled	s. d.
Working Costs	471,155		65 5
WORKING PROFIT	261,570		23 4

Additional Revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February, 1958/July, 1958 .. 6,032

Sundry Revenue less Sundry Expenditure .. 267,602
2,162

TOTAL PROFIT (subject to Taxation and Government's share) .. **£269,764**

Estimated Taxation and Government's share of profit .. £112,600
Capital Expenditure .. £183,490

DEVELOPMENT .. **PAYABLE DEVELOPMENT**

	Footage driven	Footage sampled	Footage payable	%	Av. value dwt.	Width ins.	Inch/ dwt.
Main Reef	4,073	2,855	955	33	23.3	9	210
Kimberley Reef	2,902	2,420	1,040	43	8.6	25	216

THE GROOTVLEI PROPRIETARY MINES, LTD.

ISSUED CAPITAL £2,859,704 STOCK IN UNITS OF 5s. EACH

Tons Milled .. 605,000 Gold Produced (in oz. fine) .. 128,610
Yield per Ton Milled (dwt.) .. 4.25

Working Revenue	£1,610,777	Per Ton Milled	s. d.
Working Costs	955,379		53 3
WORKING PROFIT	655,398		21 8

Additional Revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February 1958/July 1958 .. 13,596

Sundry Revenue less Sundry Expenditure .. 668,994
10,394

TOTAL PROFIT (subject to Taxation and Government's share) .. **£679,388**

Estimated Taxation and Government's share of profit .. £338,600
Capital Expenditure .. £ Nil

DEVELOPMENT .. **PAYABLE DEVELOPMENT**

	Footage driven	Footage sampled	Footage payable	%	Av. value dwt.	Width ins.	Inch/ dwt.
Main Reef	3,552	2,915	1,090	37	13.1	16	210
Kimberley Reef	1,369	1,030	390	38	80.6	5	403

VAN DYK CONSOLIDATED MINES, LTD.

ISSUED CAPITAL £2,143,650 IN SHARES OF 7s. 9d. EACH

Tons Milled .. 236,000 Gold Produced (in oz. fine) .. 43,447
Yield per Ton Milled (dwt.) .. 3.68

Working Revenue	£544,012	Per Ton Milled	s. d.
Working Costs	468,592		46 1
WORKING PROFIT	75,420		39 8

Additional Revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February, 1958/July, 1958 .. 4,984

Sundry Revenue less Sundry Expenditure .. 80,404
5,448

TOTAL PROFIT (subject to Taxation and Government's share) .. **£85,852**

Estimated Taxation and Government's share of profit .. £ Nil
Capital Expenditure .. £ Nil

DEVELOPMENT .. **PAYABLE DEVELOPMENT**

	Footage driven	Footage sampled	Footage payable	%	Av. value dwt.	Width ins.	Inch/ dwt.
Main Reef—all shafts	2,487	1,810	470	26	6.7	52	348
No. 5 Shaft area included above	523	335	110	33	9.1	42	383

In addition 2,748 feet was driven on the Kimberley horizon. 2,015 feet was sampled, all of which was unpayable.

ST. HELENA GOLD MINES, LTD.

ISSUED CAPITAL £4,812,500 IN SHARES OF 10s. EACH

Tons Milled .. 373,000 Gold Produced (in oz. fine) .. 109,111
Yield per Ton Milled (dwt.) .. 5.85

Working Revenue	£1,367,195	Per Ton Milled	s. d.
Working Costs	774,225		73 4
WORKING PROFIT	592,970		41 6

Additional Revenue received during the quarter in respect of gold sold to the Reserve Bank for the period February, 1958/July, 1958 .. 11,112

Sundry Expenditure less Sundry Revenue .. 604,082
10,236

TOTAL PROFIT (subject to Taxation and Government's share) .. **£593,846**

Estimated Taxation and Government's share of profit .. £ Nil
Capital Expenditure .. £314,264

DEVELOPMENT .. **PAYABLE DEVELOPMENT**

	Footage driven	Footage sampled	Footage payable	%	Av. value dwt.	Width ins.	Inch/ dwt.
Basal Reef	22,231	7,255	3,320	46	20.3	23	467

In addition 1,383 feet of station cutting was accomplished during the quarter, all at No. 2 Shaft.

NO. 7 SHAFT: At the annual meeting on 16th May, 1958, the Chairman mentioned that consideration was being given to the exploitation of the upthrown block of Reef-bearing ground on the eastern side of the property and that this would require the sinking of another shaft. It has now been decided that the northern part of this upthrown strip can most satisfactorily be mined from No. 2 Shaft and all rock will be hoisted and the necessary services provided at that shaft.

Accordingly, a connecting cross cut is being driven from No. 2 Shaft on 18 Level in a south-easterly direction. In order to provide the necessary ventilation for the upthrown strip and, in due course, for the lower levels of the mine west of the fault, a 22-ft. diameter circular unequipped ventilation shaft, suitably split to provide both upcast and downcast, will be sunk to a depth of approximately 4,100 feet in the first place. It will later be deepened to approximately 6,000 feet when required to serve the lower levels of No. 2 Shaft. This shaft, to be known as No. 7 Shaft, has been sited to the west of the upthrown strip. Its position is approximately 5,200 feet east-south-east from No. 2 Shaft. Work in preparation for sinking has begun.

DIVIDEND: On 12th September, 1958, Dividend No. 6 of 1s. 1d. per share was declared payable to shareholders registered at 30th September, 1958. Dividend warrants will be posted about 6th November, 1958.

WINKELHAAK MINES, LTD.

ISSUED CAPITAL 12,000,000 shares of 10s. EACH

PROPERTY

The Mining Lease was registered on 29th August, 1958, and ceded by Capital Mining Areas, Limited, to the Company on 29th September, 1958.

There is a provision in the Lease that in the event of the Honourable The Minister of Mines being satisfied that mineralisation extends beyond the southern boundary of the lease area as at present determined, application may be made for the acquisition of the undermining rights of an additional area and for its incorporation in the lease area without alteration of the lease formula provided that the additional area does not exceed 5 per cent of the lease area as at present determined.

Development by the Company westwards from No. 3 Shaft within the lease area and drilling by an associated Company outside the lease area indicate that some such adjustment to the southern boundary may be called for in the south-western portion of the lease area. Accordingly, during the quarter the Company agreed to enter into a prospecting contract with Capital Mining Areas, Limited, over an area of approximately 354 morgen on the farm Winkelhaak 135 (formerly No. 73) adjoining the south-western portion of the lease area, a portion of which ground may contain reef which could conveniently be worked by your Company.

The contract is to be for a period of two years and will provide that the Company shall have the right to purchase the mineral rights (excluding diamonds and coal) of this ground or any part thereof, measuring not less than 100 morgen, for £25 per morgen and shall also refund the cost of any boreholes previously drilled by Capital Mining Areas, Limited, in the area so purchased. It was on this ground that the borehole referred to in the Report for the quarter ended 31st March, 1957, intersected reef at 1,274 feet, assaying 25.79 dwt. over 22.1 inches. A further borehole is at present being drilled.

SHAFT SINKING

No. 3B Shaft was sunk 792 feet to a final depth of 1,471 feet and equipped. A further 357 feet of station cutting was done at Nos. 1 and 3 Shafts.

DEVELOPMENT

11,697 feet of development was driven during the quarter of which 3,625 feet were on reef and sampled. 2,440 feet were payable and averaged 10.7 dwt. over 39 inches, equivalent to 417 inch-dwt.

A discount has been applied to development values to conform with adjustments which will be necessary in estimating ore reserves.

REDUCTION WORKS

Trial milling was continued. A considerable proportion of the ore treated continued to come from development rock dumps on surface. Up to the end of the quarter revenue from sale of gold was £157,859.

SURFACE DRILLING

Borehole W.S.22 was drilled at a point 6,000 feet east of No. 1 Shaft and the Kimberley Reef was intersected at a depth of 2,785 feet. In neither the original intersection nor in three deflections were complete core recoveries obtained. Values ranged from 5 inch-dwt. to 193 inch-dwt.

EXPENDITURE

Winkelhaak Mines, Limited
Expenditure on Shafts, Plant and Equipment and General Expenditure amounted to £754,783.

Evander Township, Limited
Capital Expenditure by this Company amounted to £27,178.

NEW CONSOLIDATED GOLD FIELDS LIMITED

Registered Office: 49 MOORGATE, LONDON, E.C.2.

Mining Companies' Directors' Reports for the Quarter ended 30th September, 1958

(All companies mentioned are Incorporated in the Union of South Africa, unless otherwise stated)

RIETFontein CONSOLIDATED MINES LTD.

ISSUED CAPITAL £224,450 IN 1,122,252 SHARES of 4s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	62,500	64,500
Total yield in ounces fine	14,416	14,930
Total yield per ton (dwt.)	4.613	4.629
Working Revenue per ton milled	57s. 10d.	57s. 9d.
Working Expenditure per ton milled	47s. 1d.	46s. 2d.
Working Profit per ton milled	10s. 9d.	11s. 7d.
Working Revenue	£180,765	£186,274
Working Expenditure	147,228	149,021
WORKING PROFIT	£33,537	£37,253

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £1,646 received during the quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure Nil Nil
Taxation £14,823 £17,908

DEVELOPMENT

South Reef		
Footage sampled	505	560
Payable—Feet	300	320
Per cent	59.4	57.1
Slope Width (in.)	43.0	43.7
Slope Value (dwt./ton)	4.3	5.4
Inch-dwt.	185	236
Main Reef		
Footage sampled	665	965
Payable—Feet	430	655
Per cent	64.7	67.9
Slope Width (in.)	52.3	51.5
Slope Value (dwt./ton)	14.5	10.3
Inch-dwt.	758	530
North Reef		
Footage Sampled	285	810
Payable—Feet	40	150
Per cent	14.0	18.5
Slope Width (in.)	48.4	44.3
Slope Value (dwt./ton)	8.2	7.9
Inch-dwt.	397	350
Total Development		
Footage advanced	3,085	3,955
Footage sampled	1,455	2,335
Payable—Feet	770	1,125
Per cent	52.9	48.2
Slope Width (in.)	48.5	48.3
Slope Value (dwt./ton)	10.6	8.7
Inch-dwt.	514	420

FIRST REDUCTION OF CAPITAL—The sum of 1s. per share was returned to Members on 26th September, 1958.

FREE STATE SAAIPLAAS GOLD MINING COMPANY LIMITED

ISSUED CAPITAL £9,708,945 IN 19,417,890 SHARES OF 10s. EACH

No. 1 Shaft—During the quarter the Shaft was sunk a distance of 324 ft. to a total depth of 5,604 ft. The 8 level station was cut and supported and work is progressing on the 9 level station.

On 24th July, 1958, the Leader Reef was intersected in No. 1 shaft at a depth of 5,387 ft. below collar. The exposure was complete and sampling around the periphery of the shaft showed negligible values over a reef channel width of 37.4 in. After the shaft had passed through a further 45 in. of quartzite the Basal Reef was intersected at a depth of 5,394 ft. below collar. The exposure was complete and sampling of 16 sections around the periphery of the shaft averaged 24.9 dwt. per ton over a reef channel width of 28.2 in., equivalent to 702 in.-dwt.

In the course of cutting 8 level station the Basal Reef was again exposed and the 90 ft. sampled averaged 31.1 dwt. per ton over a reef channel width of 19.4 in., equivalent to 603 in.-dwt.

It has been decided to sink the shaft 150 ft. further than was originally intended and to cut a station on 9 level so that additional slope face can be provided between 8 and 9 levels for early stoping operations from this shaft.

No. 2 Shaft—The shaft was sunk a distance of 631 ft. to a total depth of 5,759 ft. The cutting and supporting of the 7, 8 and 9 level stations were completed, and the cutting of the 10 level station was commenced.

On 27th August, 1958, the "A" Reef was intersected in the shaft at a depth of 5,544 ft. below collar. A full exposure was obtained and sampling around the periphery of the shaft averaged 0.1 dwt. per ton over a reef channel width of 30.1 in., equivalent to 3 in.-dwt.

On 21st September, 1958, the "B" Reef was intersected in the shaft at a depth of 5,677 ft. below collar. A full exposure was obtained and sampling around the periphery of the shaft averaged 2.9 dwt. per ton over a reef channel width of 25.1 in., equivalent to 73 in.-dwt. The "B" Reef horizon is estimated to be approximately 350 ft. above the horizon of the Basal Reef, which is the economic reef in this area. The "A" and "B" Reefs were encountered at positions approximately 300 ft. lower than originally expected and the depth of the Basal Reef is now expected to be similarly affected.

Housing—The building of an additional 34 houses in Virginia Township, for European employees, has been authorized and construction work on these houses has commenced.

General—General construction work proceeded satisfactorily.

Water Disposal—Work has commenced on the delivery of the pipeline for the disposal of mine water into the pan known as Rietpan.

THE LUIPAARDS VLEI ESTATE AND GOLD MINING COMPANY LIMITED.

(Incorporated in England: Head Office: Johannesburg)

ISSUED CAPITAL £496,911 IN 4,969,105 SHARES OF 2s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Main Reef Section		
Tons milled	210,000	210,000
Total yield in ounces fine	36,126	37,419
Yield per ton (dwt.)	3.441	3.564
Working Revenue per ton milled	43s. 2d.	44s. 6d.
Working Expenditure per ton milled	41s. 8d.	43s. 0d.
Working Profit per ton milled	1s. 6d.	1s. 6d.
Working Revenue	£452,919	£467,094
Working Expenditure	437,215	451,767
WORKING PROFIT	£15,704	£15,327

Bird Reef Section		
Tons milled for gold and treated in leaching plant	152,000	150,000
Total yield—gold ounces fine	4,523	4,687
Total yield—uranium oxide lbs.	192,956	186,893
Yield per ton leached—uranium oxide lb.	1.269	1.246
Revenue from gold	£56,748	£58,496
Revenue from uranium oxide less treatment charges	645,429	628,363
Working Expenditure	£702,177	£686,859
	434,177	429,859

Working Profit (Subject to adjustment)	268,000	257,000
TOTAL WORKING PROFIT	£283,704	£272,327

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £4,529 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure—Main Reef £6,284 £8,480
Bird Reef Nil Nil
Uranium Loan Instalment £88,500 £88,500
Taxation £91,253 £81,764

QUOTA FOR SALES OF URANIUM OXIDE TO THE COMBINED DEVELOPMENT AGENCY—In terms of the agreement reached this year between the Atomic Energy Board and the Combined Development Agency, the output to be sold to the Agency has been defined. This Company has been allocated a quota of 381,510 lbs. of uranium oxide for sale to the Agency during the six months ending 31st December, 1958.

DEVELOPMENT

Main Reef Section (Gold)

Main Reef		
Footage Sampled	1,740	1,740
Payable—Feet	1,090	880
Per cent	62.6	50.6
Slope width (in.)	55.2	45.4
Slope value (dwt./ton)	6.1	7.0
Inch-dwt.	337	318

South Reef		
Footage sampled	2,295	2,450
Payable—Feet	1,430	1,825
Per cent	64.9	74.5
Slope width (in.)	34.0	34.0
Slope value (dwt./ton)	6.6	6.3
Inch-dwt.	224	214

Battery Reef		
Footage sampled	50	120
Payable—Feet	—	—
Per cent	—	—
Slope width (in.)	—	—
Slope value (dwt./ton)	—	—
Inch-dwt.	—	—

Total Main Reef Section (Gold)		
Footage advanced	8,922	10,154
Footage sampled	3,995	4,310
Payable—Feet	2,520	2,705
Per cent	63.1	62.8
Slope width (in.)	43.2	37.7
Slope value (dwt./ton)	6.3	6.6
Inch-dwt.	272	249

Bird Reef Section (Uranium)

Total Bird Reef		
Footage advanced	19,955	19,710
Footage sampled	6,305	6,270
Payable—Feet*	3,545	4,260
Per cent	56.2	67.9
Slope width (in.)	36.9	36.4
Gold—Value (dwt./ton)	1.4	1.8
Inch-dwt.	52	66
Uranium Oxide—Value (lb./ton)	2.25	2.30
Inch-lb.	83.0	83.7

* On combined Uranium Oxide/Gold content.

DOORNFONTEIN GOLD MINING COMPANY LIMITED.

ISSUED CAPITAL £4,914,000 IN 9,828,000 SHARES OF 10s. EACH

PRODUCTION	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
Gold		
Tons milled	262,000	263,000
Total yield in ounces fine	109,427	109,636
Total yield per ton (dwt.)	8.353	8.337
Working Revenue per ton milled	104s. 8d.	104s. 0d.
Working Expenditure per ton milled	60s. 4d.	60s. 8d.
Working profit per ton milled	44s. 4d.	43s. 4d.
Working Revenue	£1,371,091	£1,367,813
Working Expenditure	790,022	798,170
Working Profit	£581,069	£569,643
Uranium Oxide		
Tons milled for gold and treated in leaching plant	120,000	113,000
Total yield—Uranium oxide lbs.	28,695	28,326
Yield per ton leached—Uranium oxide lb.	0.239	0.251
Revenue less treatment charges (subject to adjustment)	£45,000	£45,000
TOTAL WORKING PROFIT	£626,069	£614,643

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £11,044 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure—		
Gold	£178,157	£292,993
Uranium	3,794	3,495
Total	£181,951	£296,488
Uranium Loan Instalment	£9,900	£9,900
State's Share of Profit	Nil	Nil
Taxation	Nil	Nil

QUOTA FOR SALES OF URANIUM OXIDE TO THE COMBINED DEVELOPMENT AGENCY—In terms of the agreement reached this year between the Atomic Energy Board and the Combined Development Agency the output to be sold to the Agency has been defined. The West Driefontein Uranium Plant, to which this Company and West Driefontein Gold Mining Company Limited contribute uranium-bearing slime for the extraction of uranium oxide, has been allocated a quota of 138,100 lbs. of uranium oxide for sale to the Agency during the six months ended 31st December, 1958, of which amount this Company's share is expected to be about 55,240 lbs.

DEVELOPMENT—Carbon Leader		
Footage Advanced	13,436	15,195
Footage Sampled	4,560	5,900
Payable—Feet	3,985	5,125
Per cent	87.4	86.9
Slope Width (in.)	41.1	41.4
Slope Value—Gold (dwt./ton)	8.5	9.3
Inch-dwt. Gold	349	385
Slope Value—Uranium oxide (lb./ton)	0.18	0.18
Inch-lb. Uranium Oxide	7.4	7.5

During the quarter 688 ft. of development was accomplished in the area outside the northern boundary of the mine, for which a mining lease has been approved.

WEST DRIEFONTEIN GOLD MINING COMPANY LIMITED

ISSUED CAPITAL £3,520,540 IN 7,041,080 SHARES OF 10s. EACH

PRODUCTION	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
Gold		
Tons milled	240,000	233,000
Total yield in ounces fine	229,074	223,396
Total yield per ton (dwt.)	19.089	19.176
Working Revenue per ton milled	239s. 2d.	239s. 7d.
Working Expenditure per ton milled	82s. 10d.	83s. 10d.
Working Profit per ton milled	156s. 4d.	155s. 9d.
Working Revenue	£2,870,371	£2,791,105
Working Expenditure	994,102	976,389
Working Profit	£1,876,269	£1,814,716
Uranium Oxide		
Tons treated in leaching plant	147,000	137,000
Total yield—uranium oxide lb.	43,133	39,364
Yield per ton leached—uranium oxide lb.	0.293	0.287
Revenue less treatment charges (subject to adjustment)	£138,000	£133,500
TOTAL WORKING PROFIT	£2,014,269	£1,948,216

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £24,653 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure		
Gold	£370,352	£431,821
Uranium	336	136
Total	£370,688	£431,957
Uranium Loan Instalment	£75,600	£75,600
State's Share of Profit	£204,089	£187,469
Taxation	£582,416	£549,991

QUOTA FOR SALES OF URANIUM OXIDE TO THE COMBINED DEVELOPMENT AGENCY—In terms of the agreement reached this year between the Atomic Energy Board and the Combined Development Agency, the output to be sold to the Agency has been defined. The West Driefontein Uranium Plant, to which this company and Doornfontein Gold Mining Company Limited contribute uranium-bearing slime for the extraction of uranium oxide, has been

WEST DRIEFONTEIN GOLD MINING COMPANY LIMITED Continued

allocated a quota of 138,100 lbs. of uranium oxide for sale to the Agency during the six months ending 31st December, 1958, of which amount this company's share is expected to be about 82,860 lbs.

DEVELOPMENT—Carbon Leader		
Footage advanced	18,941	15,474
Footage Sampled	5,415	5,515
Payable—Feet	5,125	3,515
Per cent	94.6	100.0
Slope Width (in.)	42.2	42.3
Slope Value—Gold (dwt./ton)	15.8	20.2
Inch-dwt. Gold	667	854
Slope Value—Uranium Oxide (lb./ton)	0.27	0.32
Inch./lb. Uranium Oxide	11.4	13.5

VLAKFONTEIN GOLD MINING COMPANY LIMITED

ISSUED CAPITAL £3,000,000 IN 6,000,000 SHARES OF 10s. EACH

OPERATIONS	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
Tons milled	150,000	150,000
Total yield in ounces fine	52,970	52,952
Total yield per ton (dwt.)	7.063	7.060
Working Revenue per ton milled	88s. 5d.	88s. 0d.
Working Expenditure per ton milled	53s. 10d.	53s. 10d.
Working Profit per ton milled	34s. 7d.	34s. 2d.
Working Revenue	£663,355	£659,847
Working Expenditure	404,235	403,819
WORKING PROFIT	£259,120	£256,028

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £5,434 received during the quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure	£5,257	£4,511
State's Share of Profit	Nil	Nil
Taxation	£119,722	£121,097
DEVELOPMENT—Main Reef		
Footage advanced	9,740	9,190
Footage sampled	6,985	6,610
Payable—Feet	2,175	2,585
Per cent	31.1	39.1
Slope width (in.)	41.5	41.4
Slope value (dwt./ton)	7.3	7.7
Inch-dwt.	303	319

ROBINSON DEEP LIMITED

ISSUED CAPITAL £600,000 IN 2,000,000 "B" SHARES OF 6s. EACH

OPERATIONS	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
Tons milled	221,000	215,000
Total yield in ounces fine	46,663	46,044
Total yield per ton (dwt.)	4.223	4.283
Working Revenue per ton milled	52s. 11d.	53s. 6d.
Working Expenditure per ton milled	53s. 5d.	52s. 0d.
Working Profit per ton milled	Loss	1s. 6d.
Working Revenue	£584,628	£574,725
Working Expenditure	590,093	558,558
WORKING PROFIT	Loss	£16,167

NOTES: (1) Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £4,963 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958. (2) Operations during September, 1958, were affected adversely by a series of pressure bursts.

Capital Expenditure	£3,114	£1,915
Taxation	Nil	Nil
DEVELOPMENT		
Main Reef Leader		
Footage sampled	1,235	585
Payable—Feet	310	470
Per cent	25.1	80.3
Slope width (in.)	48.8	46.0
Slope value (dwt./ton)	5.6	4.9
Inch-dwt.	273	225
South Reef		
Footage sampled	335	135
Payable—Feet	300	—
Per cent	89.6	—
Slope width (in.)	51.2	—
Slope value (dwt./ton)	8.2	—
Inch-dwt.	420	—
Pyratics		
Footage sampled	500	1,170
Payable—Feet	65	380
Per cent	13.0	32.5
Slope width (in.)	56.0	62.5
Slope value (dwt./ton)	5.8	5.4
Inch-dwt.	325	275
Total Development		
Footage advanced	3,606	2,664
Footage sampled	2,070	1,890
Payable—Feet	675	850
Per cent	32.6	45.0
Slope width (in.)	50.6	53.4
Slope value (dwt./ton)	6.8	4.6
Inch-dwt.	344	246

FIRST REDUCTION OF CAPITAL—The sum of 1s. 6d. per share was returned to Members on 26th September, 1958.

SIMMER AND JACK MINES LIMITED

ISSUED CAPITAL £675,000 IN 6,750,000 SHARES OF 2s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	271,000	269,500
Total yield in ounces fine	50,834	50,687
Total yield per ton (dwt.)	3.752	3.762
Working Revenue per ton milled	47s. 6d.	46s. 11d.
Working Expenditure per ton milled	43s. 11d.	43s. 8d.
Working Profit per ton milled	3s. 1d.	3s. 3d.
Working Revenue	£637,065	£632,204
Working Expenditure	595,677	588,651
Working Profit	£41,388	£43,553

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £5,421 received during that quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure	£8,381	£3,450
State's Share of Profit	£2,086	£3,162
Taxation	£1,283	£1,447

DEVELOPMENT

Main Reef		
Footage sampled	2,175	2,150
Payable—Feet	840	660
Per cent	38.6	30.7
Slope Width (in.)	48.5	48.4
Slope Value (dwt./ton)	5.5	5.8
Inch-dwt.	267	281
Main Reef Leader		
Footage Sampled	2,890	1,705
Payable—Feet	995	475
Per cent	34.4	27.9
Slope Width (in.)	38.9	41.0
Slope Value (dwt./ton)	5.5	6.0
Inch-dwt.	214	246
South Reef		
Footage Sampled	600	740
Payable—Feet	180	300
Per cent	30.0	40.5
Slope Width (in.)	49.2	46.5
Slope Value (dwt./ton)	7.2	7.7
Inch-dwt.	354	358
Total Development		
Footage advanced	9,229	7,645
Footage sampled	5,665	4,595
Payable—Feet	2,015	1,435
Per cent	35.6	31.2
Slope Width (in.)	43.8	45.6
Slope Value (dwt./ton)	5.7	6.3
Inch-dwt.	250	287

FIRST REDUCTION OF CAPITAL—The sum of 6d. per share was returned to Members on 26th September, 1958.

LIBANON GOLD MINING COMPANY LTD.

ISSUED CAPITAL £3,968,650 IN 7,937,300 SHARES OF 10s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	294,000	298,000
Total yield in ounces fine	69,056	68,753
Total yield per ton (dwt.)	4.698	4.614
Working Revenue per ton milled	58s. 11d.	57s. 7d.
Working Expenditure per ton milled	47s. 9d.	46s. 7d.
Working profit per ton milled	11s. 2d.	11s. 0d.
Working Revenue	£865,625	£857,773
Working Expenditure	701,518	694,549
Working Profit	£164,107	£163,224

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £7,381 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure	£85,525	£86,756
Taxation	Nil	Nil

DEVELOPMENT

Main Reef		
Footage Sampled	3,200	2,780
Payable—Feet	2,330	1,995
Per cent	72.8	71.8
Slope width (in.)	51.0	49.8
Slope value (dwt./ton)	5.8	6.5
Inch-dwt.	296	324
Contact Reef		
Footage Sampled	1,760	1,425
Payable—Feet	1,055	1,060
Per cent	59.9	74.4
Slope width (in.)	48.7	44.8
Slope Value (dwt./ton)	9.9	10.8
Inch-dwt.	482	484
Total Development		
Footage Advanced	16,995	15,590
Footage Sampled	4,960	4,205
Payable—Feet	3,385	3,055
Per cent	68.2	72.7
Slope width (in.)	50.3	48.1
Slope value (dwt./ton)	7.0	7.9
Inch-dwt.	352	380

In addition 494 feet of exploratory development was carried out under prospecting permit outside the north-western boundary of the mine, during the quarter ended 30th September, 1958.

HARVIE-WATT SHAFT—During the quarter ended 30th September, 1958, the Harvie-Watt Shaft was sunk a distance of 553 feet to a total depth of 1,230 feet.

VENTERSPOST GOLD MINING COMPANY LIMITED

ISSUED CAPITAL £2,450,000 IN 4,900,000 SHARES OF 10s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	391,000	341,000
Total yield in ounces fine	96,491	80,787
Total yield per ton (dwt.)	4.936	4.738
Working Revenue per ton milled	61s. 10d.	59s. 2d.
Working Expenditure per ton milled	52s. 6d.	56s. 5d.
Working Profit per ton milled	9s. 4d.	2s. 9d.
Working Revenue	£1,208,801	£1,008,436
Working Expenditure	1,026,995	967,945
Working Profit	£181,806	£46,491

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £8,586 received during the quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure	£34,554	£82,215
Taxation	£60,000	£21,981

DEVELOPMENT

Main Reef		
Footage sampled	7,270	4,770
Payable—Feet	4,320	1,765
Per cent	59.4	37.0
Slope Width (in.)	61.2	58.6
Slope Value (dwt./ton)	4.9	4.6
Inch-dwt.	300	270
Contact Reef		
Footage Sampled	4,760	4,015
Payable—Feet	3,300	2,315
Per cent	69.3	57.7
Slope Width (in.)	52.9	51.2
Slope Value (dwt./ton)	13.1	9.9
Inch-dwt.	693	507
Total Development		
Footage Advanced	19,902	15,655
Footage Sampled	12,030	8,785
Payable—Feet	7,620	4,080
Per cent	63.3	46.4
Slope Width (in.)	57.6	54.4
Slope Value (dwt./ton)	8.2	7.4
Inch-dwt.	472	403

THE SUB NIGEL LIMITED

ISSUED CAPITAL £885,937 IN 1,771,875 SHARES OF 10s. EACH

	Quarter ended 30th September, 1958	Quarter ended 30th June, 1958
OPERATIONS		
Tons milled	199,500	199,500
Total yield in ounces fine	48,098	48,357
Total yield per ton (dwt.)	4.822	4.848
Working Revenue per ton milled	60s. 5d.	60s. 7d.
Working Expenditure per ton milled	52s. 7d.	53s. 0d.
Working Profit per ton milled	7s. 10d.	7s. 7d.
Working Revenue	£602,791	£603,995
Working Expenditure	524,803	528,650
Working Profit	£77,988	£75,345

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £5,270 received during the quarter in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure	£8,962	£4,231
Taxation	£28,538	£30,667

DEVELOPMENT

Main Reef		
Footage advanced	5,812	6,359
Footage sampled	5,335	5,550
Payable—Feet	1,455	1,465
Per cent	27.3	26.4
Slope Width (in.)	36.2	36.9
Slope Width (dwt./ton)	8.8	9.5
Inch-dwt.	319	351

WEST WITWATERSRAND AREAS LIMITED

ISSUED CAPITAL £1,026,468 IN 2,111,712 SHARES OF 2s. 6d. EACH

DRILLING—Drilling operations were confined to Borehole No. E.10E on farm Gerhardminnebron No. 4. The borehole was advanced 93 ft. through leached and cavernous dolomitic limestone and chert to a depth of 838 ft. when some 60 ft. of drill rods became irretrievably stranded in it. An effort to deflect the borehole above the stranded rods also failed owing to the broken nature of the ground, and it became necessary to re-drill the borehole from surface. A new hole was started a short distance west of the original one and had reached a depth of 192 ft. at the end of the quarter.

INCREASE IN SHARE CAPITAL—In September, 1958, the authorised capital was increased from £900,000 divided into 7,200,000 shares of 2s. 6d. each to £1,085,624 divided into 8,684,992 shares of 2s. 6d. each by the creation of 1,484,992 new shares of 2s. 6d. each. The Issued Capital was increased to £1,026,468 by the issue of the 1,484,992 newly created shares to Members of New Consolidated, Free State, Exploration Company Limited and/or their nominees. Particulars of this issue were set out in a Circular to Members dated 25th August, 1958.

INVESTMENTS—The entire issued share capital of New Consolidated, Free State, Exploration Company Limited of 3,712,500 shares of 5s. each having been acquired in September, 1958, that Company has become a wholly owned subsidiary of West Witwatersrand Areas Limited, and its principal assets of 1,247,564 shares in Harmony Gold Mining Company Limited and 1,931,050 shares and 11,490 6½ per cent. Registered Unsecured Convertible Notes, 1965, in Free State Saaipiaas Gold Mining Company Limited, can be considered now to be part of this Company's investment portfolio.

VOGELSTRUISBULT GOLD MINING AREAS LIMITED

ISSUED CAPITAL £2,514,286 IN 5,028,571 SHARES OF 10s. EACH

PRODUCTION	Quarter ended 30th September, 1958	Quarter ended June, 1958
Gold		
Tons milled	285,000	287,000
Total yield in ounces fine	63,442	63,730
Total yield per ton (dwt.)	4.452	4.441
Working Revenue per ton milled	55s. 11d.	55s. 7d.
Working Expenditure per ton milled	46s. 9d.	46s. 9d.
Working Profit per ton milled	9s. 2d.	8s. 10d.
Working Revenue	£797,225	£797,692
Working Expenditure	666,290	671,520
WORKING PROFIT	£130,935	£126,172
Uranium Oxide and Pyrite		
Tons milled for gold and treated in leaching plant	129,400	132,800
Total yield—uranium oxide, lbs.	53,349	60,497
Yield per ton leached—uranium oxide, lbs.	0.412	0.456
Total yield—pyrite tons	10,470	11,049
Revenue less treatment charges (subject to adjustment)	162,000	162,000
TOTAL WORKING PROFIT	£292,935	£288,172

NOTE: Working Revenue for the quarter ended 30th September, 1958, does not include an amount of £6,990 received in respect of gold sold to the South African Reserve Bank for the period February to July, 1958.

Capital Expenditure—		
Gold	Cr. £426	£2,982
Uranium	Nil	Nil
Uranium Loan Instalment	£72,000	£72,000
Taxation	£96,576	£113,079

VOGELSTRUISBULT GOLD MINING AREAS LIMITED *Continued*

QUOTA FOR SALES OF URANIUM OXIDE TO THE COMBINED DEVELOPMENT AGENCY—In terms of the agreement reached this year between the Atomic Energy Board and the Combined Development Agency, the output to be sold to the Agency has been defined. This Company has been allocated a quota of 104,320 lbs. of uranium oxide for sale to the Agency during the six months ending 31st December, 1958.

DEVELOPMENT

Main Reef		
Footage Sampled	4,405	5,220
Payable—Feet	1,220	1,340
Per cent	27.7	25.7
Slope width (in.)	41.7	40.3
Slope value (dwt./ton)	6.8	4.7
Inch-dwt.	284	189
Kimberley Reef		
Footage Sampled	4,195	3,745
Payable—Feet	1,080	975
Per cent	25.7	26.0
Slope width (in.)	47.4	53.6
Gold Value (dwt./ton)	6.3	6.2
Inch-dwt.	299	332
Uranium Oxide : Content (lbs./ton)	0.75	0.46
Inch-lb.	35.6	24.7
Total Development		
Footage Advanced	10,472	10,853
Footage Sampled	8,600	8,965
Payable—Feet	2,300	2,315
Per cent	26.7	25.8
Slope width (in.)	44.4	45.9
Gold : Value (dwt./ton)	6.6	5.4
Inch-dwt.	293	248

NOTES—The development returns of the above Companies show the actual sampling results : adjustments which may be required when estimating ore reserves have not been applied.

Copies of the Reports may be obtained from the London Secretary of the Companies, 49, Moorgate, London, E.C.2.

